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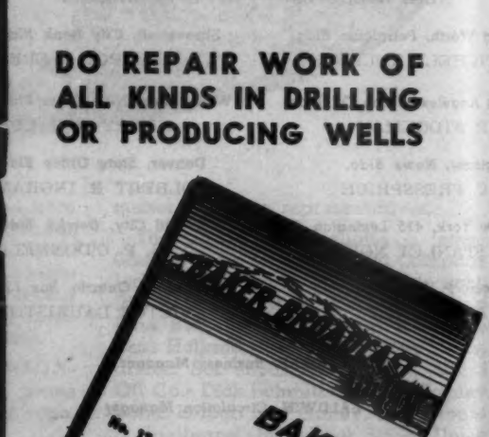

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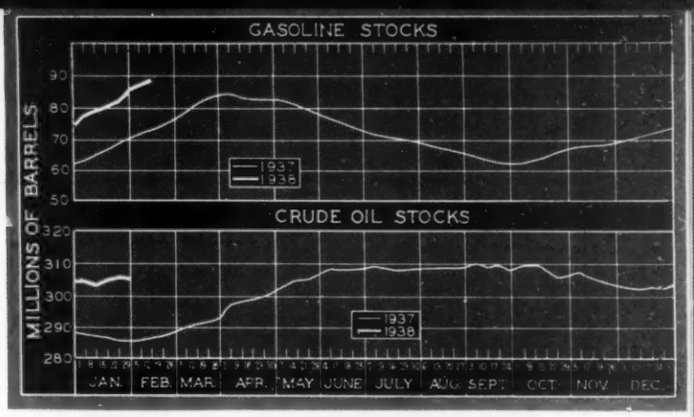


All Areas Are Not Curtailing

MARKET students continue to emphasize the need of further reductions in refinery operations, particularly in those areas which so far have not contributed their full share in the required seasonal adjustments in operations. They contend that while there have been decreases in crude runs to stills for the country as a whole since the first of the year, the latest reports on gasoline stocks show that the weekly increases are still excessive, with more serious trouble ahead if conditions are not corrected.

CRUDE PRODUCTION *3,323,599 barrels daily average—up 10,223 barrels.*

CRUDE STOCKS *304,286,000 barrels as of January 29—down 138,000 barrels.*

GASOLINE STOCKS *87,813,000 barrels as of February 12—up 1,329,000 barrels.*

REFINERY RUNS *3,150,000 barrels daily week ending February 12—down 5,000.*

They feel that the burden of retrenchment in plant operations has not been equally borne over the past few months. They cite the A.P.I. data for the week ending February 5, which show reductions in crude runs to stills of 300,000 barrels daily, or 8.7 per cent, compared to the week ending September 25, the highest point of 1937. A study of the data by refining areas reveals that outside of California by far the largest percentage of reduction in refinery operations since September has been in Oklahoma and Kansas. The runs to stills of the plants in those states have been reduced 67,000 barrels, or more than 21 per cent, since last September. Due to this large reduction, gasoline stocks in the two states are less than they were a year ago. This compares with a gain in inventories of more than 25 per cent for the rest of the country. Appalachian refiners have reduced their runs 17 per cent and the decrease in California for the two weeks under consideration was 17.8 per cent.

In contrast it is pointed out that the operations of a group of large refineries in Indiana, Illinois and part of Ohio are only 3 per cent under the September level, despite large gains in gasoline stocks. Reductions in operations of East Coast, Coastal Louisiana and North Louisiana and Arkansas are also below the average for the country.

It is contended that future curtailments in operations must come from these areas rather than from sections where some plants are shut down and many others are operating at 50 per cent of capacity.

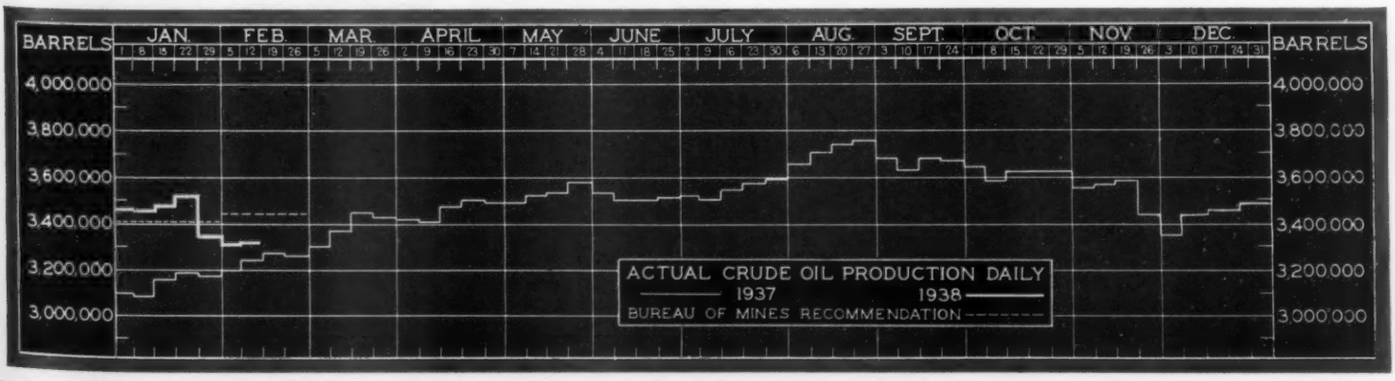
The same observers, examining the crude production figures, feel that Texas, Oklahoma and Kansas are doing more than their share in bringing about reductions in current national output. Louisiana output, for example, is near the peak of last year and continues to run ahead of both the state allowable and the Bureau of Mines recommendation.

No important changes were apparent in either crude or refinery markets in the week except the collapse in the Mid-Continent natural gasoline market.

Daily Average Production for Week

	Feb. 12 1938	Bur. Mines Feb. est.	Feb. state allowables	Feb. 5 1938
Oklahoma City	100,000	.....	.....	114,025
Fitts	64,175	.....	.....	69,850
Remainder of state	346,950	.....	.....	349,225
Total Oklahoma	511,125	569,700	500,000	533,100
East Texas	424,650	.....	.....	423,983
West Texas	178,000	.....	.....	176,548
North Central Texas	90,699	.....	.....	89,950
Texas Panhandle	60,900	.....	.....	55,550
East Central Texas	91,498	.....	.....	89,349
Gulf Coast Texas	294,100	.....	.....	288,600
Southwest Texas	95,753	.....	.....	94,599
Total Texas	1,235,600	1,365,700	1,200,000	1,218,585
North Louisiana	78,595	.....	.....	80,650
Gulf Coast Louisiana	176,750	.....	.....	177,350
Total Louisiana	255,345	239,400	244,700	258,000
California	738,250	693,700	693,700	727,000
Kansas	179,300	176,400	176,400	179,950
Arkansas	47,120	36,800	.....	41,525
Eastern fields	136,800	130,000	.....	133,150
Michigan	50,319	52,800	.....	48,716
New Mexico	105,030	105,100	101,100	107,070
Rocky Mountain area	64,710	68,600	.....	66,280
Total United States	3,323,599	3,438,200	.....	3,313,376

Increase, 10,223 bbls. daily.



Promoters of F Encouraged b

By HENRY D. RALPH

WASHINGTON, D. C., Feb. 14.—The congressional drive for an excise tax on fuel oil appears to be gaining momentum, aided, perhaps inadvertently, by President Roosevelt, although considerable mystery surrounds the extent of the president's interest in the subject.

The president was drawn into the picture during the week through a memorandum on petroleum reserves which he sent to Chairman Doughton of the house ways and means committee and which Representative Patrick J. Boland of Pennsylvania, author of the fuel tax bill, said gave him great encouragement.

A perplexing thing, however, was the fact that the president's memorandum referred to a proposal of placing a tax on crude petroleum, whereas the Boland bill would place a tax of 1 cent per gallon only on fuel oil used for heating. When the president was asked about this discrepancy, he declined to clarify it, declaring the questioner knew perfectly well what has been done, adding there had been a request for information and some had been supplied and more was being obtained.

President Roosevelt's reference to a crude petroleum tax may have been an inadvertent misstatement. Or it may have had reference to the proposal pending before the ways and means committee to repeal the present excise tax on production of crude petroleum—the "hot" oil regulatory tax. Or it may be a revelation that the administration is contemplating a new tax on crude petroleum as a conservation measure.

A week before the memorandum went to the White House, President Roosevelt had been visited by Senator Guffey of Pennsylvania and Congressmen Boland and Flannery, who represent anthracite-producing districts, in the interest of the Boland fuel-oil tax bill, which has been pending for two or three years without attracting much attention. Following this meeting, President Roosevelt told a press conference he had asked the Department of the Interior to submit information on petroleum reserves. The two Pennsylvania congressmen are advocating the fuel-oil tax as a conservation measure, stressing the need for conserving oil for purposes of national defense. The two recently appeared before the ways and means committee to urge the tax be included in the pending revenue bill and they later announced if the committee does not grant their request they will offer it as an amendment when the bill is debated on the floor of the house.

The memorandum to Chairman Doughton was apparently in answer to Mr. Boland's request for information on petroleum reserves, and it was released by him rather than by the chairman. Further inquiry, however, revealed the material submitted by the president was not prepared by the Department of the Interior for this purpose, and that the Petroleum Conservation Division and the Bureau of Mines are still engaged in preparing material in answer to the president's request on behalf of Mr. Boland.

Attached to the memorandum were two documents, a report on the conference of governors of oil-producing states held at Hot Springs, Ark., January 24, 1938, prepared by E. B. Swanson of the Petroleum Conservation Division, and an estimate of petroleum reserves in the United States prepared by Alex W. McCoy of Ponca City, Okla., which was released at the Hot Springs conference by Governor Marland. Mr. Swanson attended the conference at the direction of the president, and on his return, as a matter of routine, he presented to the president a factual report on the conference and enclosed a copy of the McCoy document. Department of Interior officials declined to reveal the material being prepared to answer the president's request, but several indicated they would be reluctant to place themselves on record as predicting the petroleum supply of the country will be exhausted on any particular date.

In support of their fuel-oil tax plan, Congressmen Boland and Flannery this week sent to all members of congress an eight-page bulletin with the title, "Should Fuel Oil Be Taxed?" Instead of advocating the Boland bill as a separate piece of legislation, they are proposing an amendment to the pending revenue bill to read as follows: "There is hereby imposed on the sale of fuel oil to any person for use by such person for the generation of heat or power, but not for use as fuel for an internal combustion engine, a tax of 1 cent per gallon to be paid by the seller thereof; provided that as used in this section the term 'fuel oil' includes crude petroleum and any derivative thereof suitable for use as a fuel, but does not include kerosene, gasoline, benzol, benzine, or naphtha."

The Boland-Flannery pamphlet opens with the following declarations:

"It is conceded that this tax is bound to come. It should be levied now—

"First, because the government should now have the benefit of the resulting revenue;

"Second, because this tax should be considered as a logical part of an integrated revenue bill;

"Third, because the past side-stepping of the tax has too long encouraged the prodigal waste of a priceless national resource;

"Fourth, because notice of the revenue this tax will yield permits a fairer appraisal of other tax items in their separate or aggregate relation to governmental needs."

The booklet estimates the tax would yield $169,000,000 annually, and its collection would not be difficult because it would be imposed on large distributing enterprises, and declares: "Oil is fundamentally a luxury fuel, whether it be used by industrial or domestic consumers, and in the search for federal revenues it is an obvious but neglected object of fair taxation."

The booklet contains many quotations from the Bureau of Mines yearbook bearing on fuel oil and gasoline production and estimates of petroleum reserves, but the quotations are liberally interspersed with observations by the authors of the pamphlet. Among the arguments used are that

Marland's Statement

"The federal government, instead of trying to find new ways to tax the oil business, should give it the cooperation required so that new reserves will be found as needed," said Governor E. W. Marland of Oklahoma regarding the proposed 1-cent tax on fuel oil. He explained that the McCoy report presented at the recent Hot Springs conference which he sponsored did not predict a shortage of crude oil provided the industry received prices high enough to continue and expand its search for new oil.

The McCoy data on reserves were attached to a memorandum sent by President Roosevelt to the ways and means committee of the house of representatives. The memorandum indicated concern by the president regarding a possible shortage of petroleum.

"The proposed tax would defeat the very purpose of the Hot Springs conference," concluded the governor, who will compile additional data on reserves for presentation at a conference of governors to be held later in the year.

Fuel Oil Tax by Support

the substitution of coal for oil as a fuel will result in increased employment and more revenue for the railroads, and that the tax will force refiners to use crude oil for the maximum production of gasoline instead of producing fuel oil for a purpose already served by coal, thus leading to a more economical use of the available petroleum reserves.

Congressman Boland is in a politically strategic position to secure adoption of his fuel-oil tax proposal, not only because he is a prominent administration supporter, but because he occupies the position of whip of the house. In this capacity he is responsible for seeing that democratic members are on the floor whenever an important vote is being taken, and, together with the speaker and the majority floor leader, he has often forced recalcitrant representatives into line in support of important administration measures. This position gives him a great deal of influence with the administration, and he has also earned the gratitude of many members of congress for helping to put through measures in which they were interested and is in a position to request their support for his own legislation. Moreover, the tax has the endorsement of the politically powerful United Mine Workers of America and presumably will be supported by all members of congress from coal-producing districts. If, in addition, it can be represented that President Roosevelt considers the tax an aid to oil conservation, it is apparent it will have strong support if and when it comes up for a vote in the house.

Acme

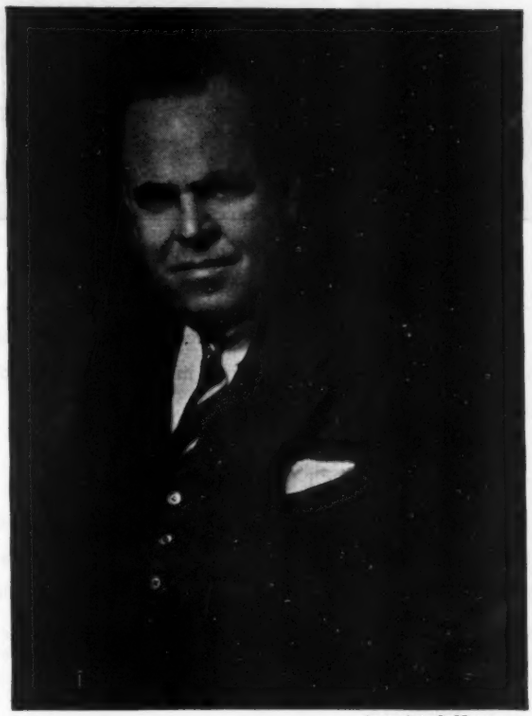
Rep. Patrick Boland, of Pennsylvania, author of fuel and tax bill

Intelligent appraisal of the oil shortage scare is shown in the following comment from the Christian Science Monitor:

"The mistake lies in the implication that the known reserves are the only reserves; that technology has given up the task of utilizing oil better; that the oil supplies are limited to the actual liquid wealth. All these factors are vital in discussing the future of oil.

"The fact is that, ever since the dark prophecies were first uttered, new sources have constantly been tapped. In 1936, 15,000 out of 21,000 wells drilled contained oil; and the oil obtained from these wells alone was sufficient to meet current consumption. Such a ratio of productive wells to new wells tapped is likely to continue. For there is a tremendous area still remaining unexplored. That much of this area would be oil-bearing is the verdict of geologists. They describe the area as 'of geological formation which may contain oil.' Oil men themselves speak about the possibilities without any such qualifications.

"And their confidence is not based upon hope, either. Modern drilling methods have indicated that great tracts of subterranean America must be swimming in liquid wealth. An example is East Texas. Under the old methods of drilling the sand did not seem very promising. Six years ago, however, a new drill hit the rim of an enormous buried saucer, and a flood of oil gushed forth revealing a mammoth strike. This strike was due to the greater depth achieved by the drilling. Now the drillers go down as far as 2 miles, at which depth the oil men have been able to tap oil wells below oil wells, as in the Santa Fe field."



Associated News

Regarding the proposed federal tax on fuel oil, G. Harvey Porter, managing director of the Oil Burner Institute, says the tax:

Would be exceedingly discriminatory—taxing one important fuel while permitting competing fuels to be sold untaxed.

Would penalize 1,500,000 home owners who installed oil burners to economize on fuel bills.

Would add an average of $21.00 to the annual fuel bill of 1,500,000 householders who use oil to heat their homes.

Would be equal to a sales tax of 15 per cent on fuel oil for heating.

Would increase the heating expenses of the approximately 1,400,000 families who depend on oil-fired space heaters.

Would discourage and in many cases discontinue the use of the most economical form of automatic heat—oil heating. Oil fuel is conserved to a minimum required for heating; coal must be burned continuously.

Would be a burden on many poor families who use oil stoves for heating their homes and who are now dependent upon the relief rolls.

Would even discourage construction and ownership of small homes, which we are now urging nationally.

Would encourage continuation of the extravagant and wasteful methods which prevailed in the coal industry at the expense of the whole public until the oil-burner industry forced them to educate their customers in the principles of economic firing to justify the dollar value of their product.

Would be a "nuisance" levy because of excessive collection and administrative costs. Undersecretary of the Treasury Roswell Magill stated January 15, 1938, Treasury's intention of gradually removing all "nuisance" taxes.

Would be damaging to the investment of home owners who have invested hundreds of millions of dollars in oil-burning appliances. Fuel costs even affect the value of homes in resale.

He maintains, in the interest of manufacturers, distributors, dealers, jobbers and salesmen in the industry, that the proposed tax:

Would seriously retard progress in the domestic heating field, where oil has eliminated home drudgery, increased cleanliness in the home, provided low cost automatic heat, raised the standards of living, comfort and health.

Would be damaging to the investment of manufacturers, dealers, jobbers, and sales units who have invested millions of dollars in the production and selling end of the industry.

Would tend to unbalance the full utilization of crude oil—which is conservation—by forcing one of its important by-products out of use. If the price is too high what will be done with the fuel oil?

Would jeopardize the employment of thousands of workers in the manufacturing plants, distributors, dealers and jobbers sales offices.

He has no doubt that, when all of the above facts which are being presented to the industry and our congress are properly weighed, the proposed taxation will be killed.

SPARKS FROM THE NEWS

OPEN SPACES

Sixteen wildcatters took the field in the wide open spaces of Oklahoma the past week in as many attempts to open new producing areas.

CONSOLATION

Natural gasoline manufacturers in the Mid-Continent with their product selling as low as 1¾ cents per gallon at least have the consolation of knowing they are nearer bottom than any other branch of the industry.

SANS "CLIMATE"

Three California companies, forgetting climate for a time, will drill a deep wildcat test in Alaska.

LEADING

K.M.A. leads the oil country with 151 wells drilling and 59 rigs up. The problem of adequate outlets shortly will face operators in this major area.

MARINE NEWS

Texas, not content with having the most production on land, brought in its first well in coastal waters last week. Numerous tests now under way probably will open a large under-water area for development.

REAL PURPOSE

Coal interests hope to cripple their oil competitors with a fuel oil tax and thus be free to advance coal prices to consumers several hundred million dollars yearly.

MADISON AGAIN

The plea of East Texas refiners to Washington reflects the significance of the Madison trial. The independent refiner needs the outlets available in the past from the larger operators.

OUT ON LIMB

Gasoline dealers, who before the dealer marketing plan looked to their refinery sources of supply for help when the going became rough, now find themselves out on the proverbial limb due to their own secret price-cutting.

SOMETHING ELSE

Five years ago a statement by a high Department of Justice official that the department shopped around for a "favorable court" before bringing an antitrust case would have shocked a nation. Now it's "just something else" out of Washington.

MAJOR GASSER

Cement, Okla., operators took time out from discovering new oil pay horizons to bring in a gas well with flow estimated at 150,000,000 to 200,000,000 feet daily. Enough fuel to supply a major city.

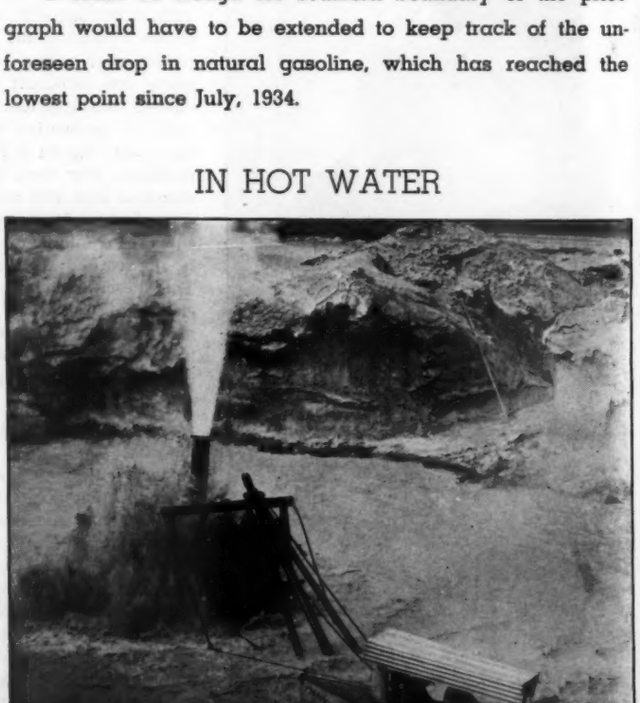
PENNY SAVED, ETC.

Refiners have found a way to save money if not to make it, to-wit: close the plant.

EXTENSION

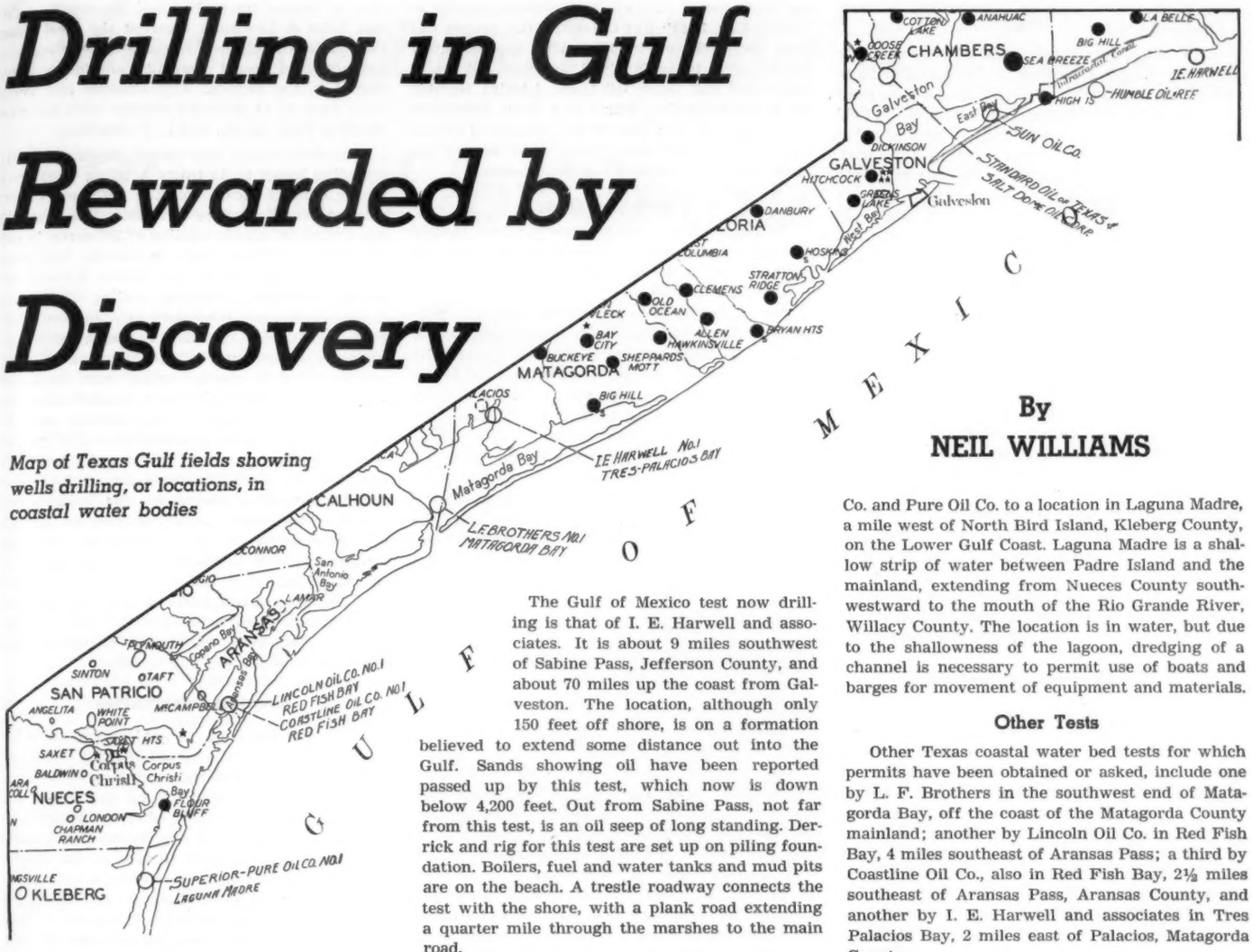
It looks as though the southern boundary of the price graph would have to be extended to keep track of the unforeseen drop in natural gasoline, which has reached the lowest point since July, 1934.

IN HOT WATER



Firefighters had to take to boats in water boiling hot to extinguish a cratered well in La Blanca field, Southwest Texas

Drilling in Gulf Rewarded by Discovery



Map of Texas Gulf fields showing wells drilling, or locations, in coastal water bodies

HOUSTON, Tex., Feb. 14.—An extensive drilling play to exploit oil potentialities of the Gulf of Mexico and bays along the Texas Coast is getting under way.

The first field was opened February 12 when Standard Oil Co. of Texas and Salt Dome Corp. Joint Account No. 1 State, 1 mile offshore from Cedar Point, in western Chambers County, Gulf Coast area, was showing for 22 bbls. an hour on quarter-inch choke. It is located near the north bank of Galveston Bay, and not far from Cotton Lake field and the Goose Creek field.

The oil is coming from the Frio or Lower Oligocene sand, bottomed at 6,030 feet. A core showing 73 feet of saturated shale and sand was recovered.

Another deep test, located in the Gulf off the coast of Jefferson County, is drilling and a third test, also in the Gulf off the Jefferson County coast, is rigging up. Work preliminary to rigging up has been started at two other locations, and permits have been obtained, or applied for, for a half dozen additional such wildcats.

Water-bed drilling is due to assume rapidly growing importance in South Texas development during the remainder of this year and the next few years. Hundreds of thousands of acres of submerged lands, comprising substantial portions of nearly all the numerous coastal water bodies as well as the Gulf of Mexico proper at several places, have been leased from the state within recent years. The many oil-field prospects already indicated in these waters will be the incentive for a great amount of wildcat drilling.

By NEIL WILLIAMS

The Gulf of Mexico test now drilling is that of I. E. Harwell and associates. It is about 9 miles southwest of Sabine Pass, Jefferson County, and about 70 miles up the coast from Galveston. The location, although only 150 feet off shore, is on a formation believed to extend some distance out into the Gulf. Sands showing oil have been reported passed up by this test, which now is down below 4,200 feet. Out from Sabine Pass, not far from this test, is an oil seep of long standing. Derrick and rig for this test are set up on piling foundation. Boilers, fuel and water tanks and mud pits are on the beach. A trestle roadway connects the test with the shore, with a plank road extending a quarter mile through the marshes to the main road.

On the strength of the Standard Oil Co. of Texas well, Humble Oil & Refining Co. has applied to the War Department for permits to drill on three different tracts in the bay at that place. One of these tests will offset to the north the tract on which the well is located. The others are in the same block of tracts but farther from the well.

About 20 miles down the Jefferson County coast, Humble Oil & Refining Co. is rigging up for a deep test on another prospect. This location is approximately 4,000 feet off shore. Drilling will be done on a piling foundation "island," plans and specifications for which were approved by the U. S. War Department some time ago. A dry hole was drilled by this company on the beach at this point several years ago. This test, along with later geophysical work, has indicated the field might be out in the Gulf.

Sun Oil Co. is dredging a channel from the Intercoastal Canal in East Bay (eastern extremity of Galveston Bay) to a location on the marshy north shore of Bolivar Peninsula, a narrow strip of land which separates East Bay from the Gulf of Mexico. The prospect, found by geophysical exploration several years ago, is believed to extend out under the bay. The land portion, on Bolivar Peninsula, was leased largely by Sun Oil Co. and Gulf Oil Corp. Various companies hold adjacent leases in the bay. The bed of the Gulf of Mexico on the opposite side of the peninsula also is under lease in tracts a half mile wide and extending 3 miles out from shore.

The channel is being dredged by Superior Oil Co. and Pure Oil Co. to a location in Laguna Madre, a mile west of North Bird Island, Kleberg County, on the Lower Gulf Coast. Laguna Madre is a shallow strip of water between Padre Island and the mainland, extending from Nueces County southwestward to the mouth of the Rio Grande River, Willacy County. The location is in water, but due to the shallowness of the lagoon, dredging of a channel is necessary to permit use of boats and barges for movement of equipment and materials.

Other Tests

Other Texas coastal water bed tests for which permits have been obtained or asked, include one by L. F. Brothers in the southwest end of Matagorda Bay, off the coast of the Matagorda County mainland; another by Lincoln Oil Co. in Red Fish Bay, 4 miles southeast of Aransas Pass; a third by Coastline Oil Co., also in Red Fish Bay, 2½ miles southeast of Aransas Pass, Aransas County, and another by I. E. Harwell and associates in Tres Palacios Bay, 2 miles east of Palacios, Matagorda County.

Although drilling has been going on in coastal water beds of southern Louisiana for many years, and a number of important fields have been found and developed in them, such operations on the Texas Coast have been limited. The only coastal water beds of Texas, other than bayous, in which any drilling has been done until now are Tabbs

Standard of Texas and Salt Dome Oil Corp. No. 1 Galveston Bay

and Turtle bays, northern extremities, or arms of Galveston Bay.

The old Goose Creek field reaches out into Tabbs Bay, and a number of wells drilled there are still on production. However, at the time most of these wells were drilled, the portion of the field now in the bay was land. The bay gradually has encroached on the field due to settling of the land. Two wells have been drilled in the extreme north end of Turtle Bay (Chambers County) as a part of the Turtle Bay field, discovered a couple of years ago. These wells, drilled by Stanolind Oil & Gas Co., are located a short distance offshore offsetting wells on the shore.

Superior-Pure Test

The only test to be drilled in the open Gulf of Mexico on the Louisiana Coast is one now under way by Superior Oil Co. and Pure Oil Co., 1¼ miles offshore in Cameron Parish, and about 8 miles east of Calcasieu Pass. This is about 50 miles east of where the Harwell test is being drilled in the Gulf west of Sabine Pass, Jefferson County, Texas. However, such fields as Caillou Island, Lake Pelto, Lake Barre, Timbalier Bay, Quarantine Bay, East Hackberry (and others), are located entirely, or in part in the bays and lakes opening into the Gulf of Mexico. A major part of the Timbalier Bay field, Lafourche Parish, opened the past month, is believed to extend out into the Gulf, the discovery well being within a few hundred feet of the breakwater.

Geophysical Exploration

Geophysical exploration of Texas coastal water beds has been under way for several years, although it has been only within the past year and a half that concerted efforts have been directed along these lines. A few companies have concentrated their attention on these potentialities, and have worked not only most of the bays but also the Gulf of Mexico as far out as the 3-mile limit along most of the coastline. As a result of this work a large number of prospects already have been indicated. Exploration in Galveston and its associated bays is reported to have revealed as many as a dozen different geophysical prospects. This work was done largely by the Standard Oil Co. of Texas and Salt Dome Oil Corp. Galveston and its associated bays cover a total of more than 325,000 acres, of which more than 230,000 acres are under lease. This is the largest single body of water on the Gulf Coast other than the Gulf proper.

These bays were the first bodies of Texas coastal water beds to be leased. Turtle and Trinity bays, occupying the northern portion of Galveston Bay, were taken up early in 1935. Approximately 46,410 acres were involved in those leases. Turtle Bay is held largely by Stanolind Oil & Gas Co. although Texas Co. is a substantial owner with other companies having smaller tracts. These companies and a number of others hold substantial acreage in Trinity Bay. Leasing of Galveston Bay proper and East Bay followed in 1936 with approximately 185,000 acres being involved. Standard Oil Co. of Texas and Salt Dome Oil Corp., jointly; Humble Oil & Refining Co.; Texas Co.; Shell Petroleum Corp.; Sun Oil Co.; Tide Water Associated Oil Co. and Amerada Petroleum Corp. were among the more successful bidders for those leases.

Owned by State

In Texas, all "navigable" waters, which include all the bays and other such water bodies along the coast, as well as the bed of the Gulf of Mexico for a distance of 3 miles out, are owned by the state, and all leasing of these water beds is done by public bids. Any water beds to be leased are open to any and all bidders, and leases are awarded by the state to those bidders making the most favorable offers. The leases are offered in tracts of as nearly uniform size as possible. In the Galveston Bay sale, the tracts were a section square, except along the coastline, where shoreline irregularities made uniformity in size and shape of tracts impossible. In some of the water beds the tracts are 320 acres, except those along the shore. Tracts in the Gulf of Mexico are usually a half mile wide, extending out to the 3-mile limit, and total 920 acres.

At the sale of leases in the main part of Galveston Bay, 28 tracts in the Gulf of Mexico along Bolivar Peninsula were offered by the state with Humble Oil & Refining Co., Salt Dome Oil Co., Sun Oil Co. and Stanolind Oil & Gas Co. being the successful bidders. That stretch of the coast was divided into 35 uniform tracts but the state reserved every fifth tract, a total of seven tracts.

Other Texas coastal water beds have been leased since then. Parts of Corpus Christi Bay and the upper end of Laguna Madre adjoining Corpus Christi Bay, Nueces County, were leased in the December 18, 1936, sale. Twenty-five tracts totaling approximately 8,000 acres were offered in this sale. They are located along the shore adjacent to the Flour Bluff field, and among the more successful bidders were Humble Oil & Refining Co. and Barnsdall Oil Co., although Shell Petroleum Corp. and Sinclair Prairie Oil Co. were among other buyers.

Off Jefferson County Coast

Leases to 24 tracts, totaling 3,360 acres, in the Gulf of Mexico off the coast of Jefferson County at a point about 10 miles up from High Island; 102 tracts, totaling 32,640 acres, in Copana, St. Charles, Aransas and Red Fish bays, Aransas and Nueces counties; 73 tracts, totaling 23,360 acres, in Tres Palacios and Turtle bays, Matagorda County, and one tract in Jackson County, were awarded in a sale in July, 1937. Humble Oil & Refining Co., Shell Petroleum Corp., and Magnolia Petroleum Co., jointly, were the successful bidders for the Gulf of Mexico tracts. Humble, Barnsdall Oil Co., and Lake & Lewisohn received the most leases in Copana, St. Charles, Aransas and Red Fish bays, although 22 different companies and independents shared in the awards. Tres Palacios and Turtle bays went to 11 different bidders with the most tracts to Pure Oil Co. and L. F. Brothers.

The most recent sale was in September, 1937, including leases to 15 tracts, totaling 7,200 acres, in the Gulf of Mexico off the Jefferson County coast at the point where I. E. Harwell is now drilling a test; 149 tracts, totaling 47,700 acres, in Baffin and Alazan bays, Cayo Infiernillo, Los Olmos Creek and Lagunda De Los Olmos, Kleberg and Kenedy counties; 134 tracts, totaling 42,800 acres, in Matagorda and Carancahua bays, Jackson, Matagorda and Calhoun counties; 77 tracts, totaling 24,600 acres, in Laguna Madre; Nueces and Kleberg counties; and 11 tracts, totaling more than 3,500 acres, in permanent lakes and marshes along the coast of Calhoun, Victoria and Jackson counties. Six companies and independents shared in the Gulf of Mexico offering at this sale with Humble, Shell, and Magnolia, joint bidders, leading in number of awards. Seventeen companies and independents shared in the second named offering at this sale with Superior Oil Co., and Pure Oil Co., joint bidders, and Lake & Lewisohn leading in number of awards. In Matagorda and Carancahua bays, Texas Co., Lake & Lewisohn, and L. F. Brothers received the most awards, while six operators, among which L. F. Brothers led, shared in the awards of tracts in the permanent lakes and marshes.

Greatest Potentialities

In view of the intensive exploration which has been carried on over a period of many years and the great number of fields which have been found on the land portion of the Texas Gulf Coast, the water beds along the coast offer the greatest remaining potentialities for discoveries of new fields in this district. The land portion of the district around these water bodies, extending down to their shores and to the shore of the Gulf of Mexico, is dotted with fields, but for some reason actual drilling, except in a few instances, has stopped there until now. There never has been any question of the potentialities of these water beds for development of new fields as it is not to be assumed that a shoreline represents a line of demarcation for subsurface conditions conducive to the entrapment of oil, yet it so happens that until lately there has been little attempt on the part of operators to assume the extra hazards and difficulties of maritime drilling. With the experience which has been gained by operators in drilling of submerged lands in Coastal Louisiana, and with the more adequate equipment and facilities now available, difficulties and problems of such drilling have been overcome and hazards minimized, and exploration and development of these areas can proceed with increasing momentum.

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Cooperative Selling Agency Is Planned for Small Refiners

A proposal for the creation of a selling agency for the non-integrated and independent refiners of the Mid-Continent area is under consideration. The plan, which would embrace all the refining districts of Arkansas, Kansas, Oklahoma, Louisiana, and Texas, except the Gulf Coast district, would be embodied in the organization of "The Great American Oil Company."

The general statement remarks that more than 75 per cent of the crude these refiners put through their plants is purchased from crude oil producers at the posted market price. These refiners market their production in the same markets on practically identical freight or truck rates and this group and area can be considered one common district of origin for gasoline and other refined products of similar qualities; and, from a commercial and marketing standpoint, as well as from freight rate adjustment, they are one and the same district.

The authors, in recommending the organization of the agency, do so with the hope of bringing about a better and more orderly marketing of petroleum products from the region to be served by the agency and better enabling refiners in this region, through the larger and more intensive and economic facilities of such selling agency, more adequately to compete in the general markets for a fair share of the available business.

At present, it is argued, the independent refiners in this region are greatly handicapped by the lack of substantial, well equipped and well managed selling agencies with sufficient organizations and funds at their command properly to develop the markets and demand from this region, and properly to sell and merchandise their products in competition with petroleum products from competing fields, as well as against the ever increasing competition from the large and powerful integrated oil companies, in their own and competing regions. As individual units, the independent refiners in this region have been and are now unable to carry on proper and extensive advertising campaigns and other means of holding and developing markets for their products. This inability is one of the contributing causes to the great decline in the volume of jobber and dealer business previously enjoyed by these refiners, most of which has been yielded up to the pipe line refiners (major companies), during the past seven years.

Critics charge that the industry has been unable to prevent excesses of competition. It is against these periodic excesses that the independent refiner must combine. The general statement asks:

Who is this independent refiner and what has been his situation?

Ten years ago the non-integrated refiner felt assured of permanency in the industry especially if his operations were shrewdly managed, his working capital adequate and his plant well located.

During the N.R.A. code his problems became infinitely more complicated. To consider two: On the one hand, he was beset by new difficulties

B. L. MAJEWSKI

relating to his crude oil supply, due to proration. On the other, his pre-code selling troubles multiplied because, it is said, his markets had largely slipped away as a result of major company purchases and leases of his jobbing customers; moreover, where no purchase or lease was made, his customer was offered by the major companies a contract for supply carrying with it national consumer acceptance advertising, with which he was unable to compete. This activity of the majors so restricted the available markets that, in the aggregate, the non-integrated refiners were producing quantities of gasoline in excess of available outlets.

Ten years ago at least 30 per cent of the gasoline produced in United States refineries was sold on the open market on a day-to-day basis. As a result, it is stated, of major company operations, a gradual closure of the markets of the independent refiners occurred, resulting in a condition in which no more than 5 per cent of gasoline is traded in currently. In their attempt to match major company policies of market expansion, small refiners were led into making long-time contracts in order to preserve at least temporary control of necessary outlets. Thus, they unwittingly permitted themselves to be drawn into the act of destroying the element of day-to-day competitive buying, so eliminating the only price mechanism that would sustain a living income.

In addition to the problems of crude supply and market outlet, the independents had to keep pace with the constantly changing technique of refining processes. The race for higher octanes resulted in capital expenditures they could ill afford.

Very few refiners of this type own more than a fraction of the crude necessary to supply their refinery requirement. Logically their first concern is an adequate source of crude supply at a price that will permit a living income.

Under ordinary circumstances of competition the price of crude would have reacted to these conditions, but as a result of the exceptional influences of the code and proration, the price of crude was no longer sensitive to price of its product derivatives.

For the relief and rehabilitation of the independent refiner, it is declared, experience taught what must be done further than merely control the quantity of crude oil produced and gasoline manufactured.

If there is to be a healthy market for any commodity there must be an *actual* demand. That demand must exist at or near the time the product is made and the desire to purchase must exist at points within economic transportation limits. This demand must represent a *real* need for the product so that the buyer will pay an adequate price for it, a real competitive buying situation.

As stated before, a decade ago the independent refiner was able to find a ready market and an eager buyer. His capacity to produce did not exceed the day-to-day demand for his product. Integrated companies, formerly large purchasers from the small refiner, enlarged their plant facilities and were making all of the gasoline they required. The large independent jobber, having an established brand of his own, who purchased large volumes of gasoline from non-integrated refiners, sold out his business to the majors.

It is generally conceded that the oil marketing facilities of this country are overdeveloped

What Can Be Done?

The problem of what the independent refiner can do to improve his position in the sale of plant products is again receiving serious consideration.

The most tangible suggestion yet offered is the result of a study by a group of Mid-Continent refiners. Last year following this investigation a definite plan of organization was outlined by B. L. Majewski, sales manager of the Deep Rock Oil Corp.

This plan has since been under consideration by several independent nonintegrated and semiintegrated refiners. Changes in the original plan have been suggested and these are now under consideration. The plan in general is modeled after that of Appalachian Coals, Inc., cooperative sales unit whose operations were held by the United States Supreme Court not to be a violation of the federal antitrust laws.

The main features of the Majewski plan are outlined here to promote discussion of the sales problems of the independent refining industry by all branches of the industry.

ASSOCIATION HEAD BLAMES MADISON TRIAL FOR PLIGHT OF SMALL REFINER

The plight of the East Texas and other Mid-Continent refiners will be called to the attention of administration leaders, Senator Tom Connally of Texas promised in reply to a wire sent to the senator last week by H. B. May, president of the East Texas Marketing Association.

The wire, which gave a summary of operating conditions in the industry from the standpoint of the independent refiners, blames the Madison trial for failure of larger refiners to carry on their usual buying of gasoline and other products from the smaller operators. The wire of Mr. May to Senator Connally follows:

"Three more large refineries in East Texas, employing approximately 160 men with total monthly pay roll of approximately $30,000, have closed down within last 30 days. Prior to that, three more, with approximately 125 men and monthly pay roll of $23,000, suspended operations indefinitely. All of these refineries are so-called independent refiners and operated on federal tendered crude oil, and like all independent refiners have depended not only during NRA days but at all times on marketing at least a part of their production through so-called major company buying.

"East Texas at one time operated 80 refineries, many running 'hot' oil and were of course closed down, and rightfully so, through effective enforcement of the Connally Act. The remaining refiners have attempted to operate and give employment, and during last few months have continued to operate at a loss, knowing that to give up their crude connections might, and we believe would, make difficult if not impossible to start up at a later date. Legitimate independent refiners went through a similar situation once before and were only saved by major company purchases under the so-called Ickes plan.

"This support we are not now receiving, due undoubtedly to the Madison decision, and regardless of the merits thereof, we are convinced from sad and present actual conditions that this decision is disastrous to the independent refining and marketing industry, and is forcing rather than destroying monopoly. Jobbers who encouraged suit may believe have won a victory, but in our opinion have destroyed themselves through eliminating independent supply which has always been available to them and always will be as long as there are independent refiners. However, this supply will not be available at below cost prices, which some jobbers apparently think should be the case, giving no thought as to where the supplier is going to secure finances to operate indefinitely at a loss.

"We are very much opposed to monopoly and believe ultimately steps will be necessary to insure and guarantee free markets. However, that is for later consideration, and what we need now is immediate resumption of major company buying at prices at least equaling cost of production. If this is not done, and as a result of the Madison decision major companies, through fear of prosecution, increase their refining capacity, which we think is now under way, so as to supply their requirements 100 per cent, then through the natural development and control of retail outlets, and present prestige of distribution service and extensive advertising, can only see complete elimination of independent refiners.

"We have always depended on this market, and investigation of major company buying over last 20 years will show this. We are appealing to you to protect Texas industries by bringing this to the attention of the president, who we are sure will come to the rescue and secure relief through resumption of buying, if necessary through granting executive clemency, which we believe to be just, for as stated, regardless of technicalities, we believe conviction of buyers of independent products by the Madison court to be definitely and seriously damaging to independent refiners.

"You may ask why we do not sell our crude. Selling to major companies at the well means giving up, probably for all time, these connections and scrapping our gathering systems. You may ask why we do not sell in cargoes as major companies do. An investigation of cargo prices for East Texas crude will answer. We must pay posted prices at the well plus posted gathering transportation and loading charges, which charges are 5 to 10 cents per barrel more than present prices cargoes are being sold for on coast. You may ask will a reduction in posted price of crude help. Our answer would be 'No' from standpoint of crude sales, as cargo prices are based on differential above posted price, and as long as sales are made at a price differential less than posted transportation tariffs, we have no market.

"Price for East Texas crude to be fair must be in line with finished product prices and in line with comparative values of other crudes. Finished products markets are today too low, and a general reduction in crude prices would, we believe, immediately reflect in lower prices for finished products or, in other words, leave us in the same position.

"Immediate resumption of major company buying at fair prices will, we believe, stabilize present dangerous situation, allow us to resume operations, provide employment, and be of inestimable value to the state of Texas and the whole independent refining industry. We respectfully solicit your aid."

250 per cent. These excesses have not been indulged in by the majors alone. With a ready market for his properties in prospect, the small operator (jobber and dealer) had multiplied his facilities, and acquired gallonage at any cost only to sell out when he had reached a satisfactory or important volume. Then when competition to retain markets became the order of the day, lease and agency agreements became a factor. The small refiner attempted to meet this competition with marginal contracts based on major company postings or upon spot market guarantees.

Local protection guarantees were being used and are now employed to pry accounts away from competitors. As a result of all this we faced a market consisting of a race for gallonage irrespective of the price.

The sale of gasoline on long-time contracts is not the type of sale that will develop a price—it merely provides an outlet. Therefore, the small refiner controlling no outlets must trade on an active spot market—a market where a sufficient volume develops a trading velocity daily or else he does not realize a satisfactory price.

Contracts eliminate competitive buying rather than stimulate it.

The object of the plan is to stabilize the independent refining industry in this region by bringing about a more wholesome and rational competitive condition in the selling and marketing of petroleum products, with a view of protecting the independent refiner, his customer, the worker and the consuming public.

The plan itself simply provides for the formation of a corporation to act as a general selling agent for as many independent refiners in this region as desire to entrust their sales to it.

Its charter authorizes the agency to engage in the business of acting as a general sales agency for the independent refiners in the region, and either to sell such petroleum products direct through its own employes, or, where more efficiently and economically done, to sell same through existing and other sales agencies which might act as subagents for the general sales agent.

Counsel has prepared a charter, and a suggested set of by-laws for such corporation, as well as a stock subscription contract and a contract between the refiner and the agency. The contracts to be signed by all the refining companies are to be in the same form, and all refiners are to be given equal consideration.

It is recommended that the corporation have a board of directors of from 12 to 20, not less than three from each of the following states: Arkansas, Kansas, Louisiana, Oklahoma, and Texas, and not more than five directors to be elected at large.

The management of the corporation will be placed in the hands of a board of directors, but it is contemplated the board will employ the best available executive as president of the corporation; and that he, together with the board, will select a sales staff consisting of sales managers or vice presidents, and other staff, to conduct the business.

Control of the corporation will be in the hands of the stockholders and the management will be placed by them in the hands of the board of directors, who each serve for one year without compensation. A board thus widely scattered cannot be considered as susceptible to influence by any single refining interest or allied interests.

The problems to be met by this general agency are declared to be many and varied. Today petroleum products from this region are being sold by more refiners and agencies than there are refiners. Many of these agencies and refiners engaged in the sale of petroleum products fully realize that all sales are being made blindly without adequate information as to the cost of production and distribution, the needs of the consumers and the actual competition to be met. The result is that intelligent competition, both between the refiners in this group in this region and major refiners in this and other regions, has been destroyed and broken down.

The consumers of petroleum products, competing in many cases with each other, have no assurance that they are at any time able to buy petroleum products, which, in many cases, form a material part of the cost of production of manufacturing, transportation and industrial concerns, at a price comparable to that paid by their competitors.

Jobbers and retailers distributing petroleum products are unable to know either the quality of the products being offered them or whether or not the prices at which petroleum products

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Alaska Wildcat Will Be Drilled by Three Companies

By L. P. STOCKMAN

LOS ANGELES, Calif., Feb. 14.—Standard Oil Co. of California, Union Oil Co. and Tide Water Associated Oil Co. have started preparations to drill a joint wildcat test on approximately 135,000 acres of government lands in the Kanatak district on the south side and near the easterly end of the Alaskan Peninsula. Each company has an equal interest in the venture. The Standard company will do the actual drilling although each company will assign one crew.

Topography in region where test will be drilled

The area has been divided into five major operating units and agreements providing for prospecting and development of each unit have been entered into between the companies and the government, as approved by the secretary of interior with the understanding drilling and production activities will be unified.

The area was selected as a result of geological exploration work conducted jointly by representatives from each of the companies during the summer of 1937. Earlier independent explorations were carried on by the Standard and by Tide Water Associated companies. The initial test will be located in the Kanatak district in the upper reaches of Portage Bay in the Alaskan Peninsula approximately 8 miles inland and west across Shelikof Strait from the settlement of Karluk. Actual drilling will get under way by May 15. The structure to be tested comprises approximately 20,000 acres and consists of a well defined anticline with complete closure. The area is easily accessible and the structure surface has a moderate elevation of approximately 2,000 feet.

Preliminary Work

There are no settlements, roads, or harbor facilities in the immediate vicinity and it will be necessary to construct a beach camp for the crews engaged in road work; to unload equipment and supplies into lighters and thence to the beach and transfer them to the drilling site after completion of a road, and then to construct a camp near the projected wildcat. The steamer North Wind, a 4,000-ton vessel of Seattle, has been chartered to transport supplies. It will leave Los Angeles harbor within a few days for Alaska and will be met there by advance parties now en route. Complete equipment for wireless messages will be installed at the beach camp.

The climatic conditions are not especially satisfactory due to fog, wind and zero weather in the winter. The summer extends from about June 1 to early September. The well will be drilled with rotary equipment whereas Standard Oil Co. in its initial wildcat used gasoline engines and light drilling equipment.

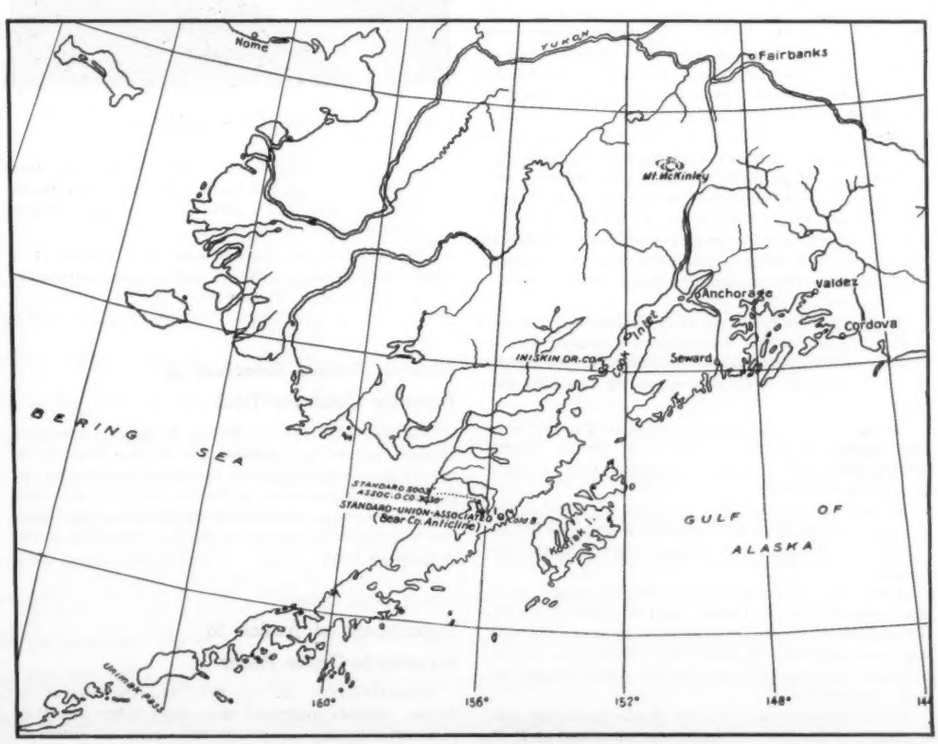
Standard of California and Tide Water Associated in 1922 each drilled two wildcats on the Pearl Creek structure approximately 25 miles northwest of the area now selected. These operations had some influence upon the location of the present well which is intended to test possibilities of the Jurassic formations in the southeasterly end of the Alaskan Peninsula. Standard's initial Alaskan wildcat was abandoned as a duster in 1926 after drilling during the summer. At the end of 1923 the wildcat had reached 1,075 feet following numerous delays due to inclement weather. At the close of 1924, it had reached 3,017 feet and was abandoned later at 5,003 feet. Tide Water Associated's wildcat was abandoned at 3,030 feet.

Geology and Topography

The new joint wildcat is about 8 miles west of tidewater in contrast with Standard's initial test which was 17 miles inland and separated from the tide line by two ranges of mountains and several miles of swamps and tundra lands. Standard's first wildcat was known as No. 1 Lee and the second was No. 1 McNally, the latter being abandoned at 700 feet. Tide Water Associated Oil Co.'s tests were No. 1 Finnegan abandoned at 560 feet and No. 1 Alaska abandoned at 3,030 feet. The new joint test will have the Lower Jurassic formation as its primary objective but it is probable the hole may be carried into the Triassic. Preliminary work indicates the Triassic might be the source bed as determined in regional work. Drilling will start in the Shelikof formation of Upper Jurassic. Production is expected at approximately 6,000 feet but this may vary one way or another. The Jurassic and Triassic formations are of Mesozoic era and the former is productive in Wyoming. The new test will be located on the Bear Creek-Salmon Creek anticline but the group also has leases on Pearl Creek anticline and the Hubbell dome in addition to two others somewhat removed from the present operations.

The Cold Bay district in which this wildcat is

(Continued on Page 38)



Location of test to be drilled in Alaska

Montana Conservation Board Denies Proration Petition

GREAT FALLS, Mont., Feb. 14.—By a vote of four to one the Oil Conservation Board of Montana denied a petition to enforce proration on the northern Montana oil fields. This meeting, called by Governor Roy Ayers after he had reviewed evidence prepared by Attorney Edwin Booth of the conservation board, was held in Great Falls starting February 11 and continued in session until today. The board is composed of Chairman L. B. O'Neil, W. E. Rice, Roy Tarrant, O. M. Webb and Howard Alger with R. P. Jackson, secretary, and Sam Ford and Edwin Booth, attorneys. The dissenting vote was cast by O. M. Webb.

OTTAWA, Ontario, Feb. 12.—Following a hearing of several days, the Federal Tariff Commission has adjourned its investigation into the crude marketing problem in the Turner Valley field.

Following evidence submitted at the preliminary hearing at Calgary, S. F. Shaw of San Antonio, Tex., petroleum engineer retained by the Turner Valley Producers Association, gave recovery estimates varying from 25 to 90 per cent for the field, with a conservative average of 40 per cent. Closer spacing of wells would give higher recovery, but would increase costs. He favored rapid withdrawal of oil where porosity was high, and suggested the 42 per cent proration be given the whole field and then allotted. If naphtha wells were closed, pressure would be increased in the crude wells and recovery made easier.

J. Grant Spratt, geologist of the Alberta government, furnished data of the geological and structural conditions.

R. V. Le Sueur, vice president of Imperial Oil, Ltd., foreshadowed increase in the 42 per cent quota as soon as the market could absorb more crude. The Imperial and British-American companies had already rescinded contracts for Montana crude. He volunteered to submit detailed cost statements in confidence to the board.

Gathering lines for the company's main pipe lines had been extended to 32 out of 35 wells, and the company was ready to take crude from all producers subject to the same 42 per cent proration provided there were satisfactory arrangements for moving the crude from terminals. The present pipe-line capacity of 13,500 bbls. a day would soon be increased to 24,000 bbls. by completion of a new 6-inch loop. Under contracts with the well owners, the Royalite company purchased crude at the well and it became Royalite's property; but no independent refiner had been refused access to this crude source. The only carrier contract was with British American Oil Co.

Mr. Le Sueur estimated between 16,000 and 17,000 bbls. a day would supply requirements of the prairie provinces, which might be increased to 20,000 bbls. with a good crop and natural growth in population. Turner Valley crude prices were fixed on a basis of $1 for Montana crude. Gasoline from Turner Valley crude was being retailed in Winnipeg and the company hopes to extend the distributing area to Rainy River in northern Ontario.

Complaints were registered by J. Gordon Ross, representing a Moose Jaw, Saskatchewan, cooperative consumers organization, regarding gasoline prices; and by Robert Wilkinson of Calgary regarding pipe line contracts.

Evidence as to the relative values of Turner Valley and Mid-Continent crude was given by Dr. George Brown, professor of petroleum engineering of Michigan State University.

George A. Walker, K.C., general solicitor of the Canadian Pacific Railway, intimated willingness of that company to discuss freight rates on crude with the producers.

Evidence as to reduction in Alberta crude prices was submitted by F. Cottle, chief accountant for the Alberta Board of Public Utilities Commissioners, who suggested purchase of 3,000 bbls. of Montana crude, by stabilizing the Montana market, might benefit Alberta producers.

Evidence regarding the use of the tetraethyl lead treatment of gasoline in Canada was submitted by P. F. Jackson for Goodrich Refining Co. of Port Credit, Ontario, who asked measures to make this process available to all Canadian refiners.

F. A. Gaby submitted evidence for British American Oil Co., while evidence for Consumers Co-operative Refinery at Regina was presented by H. L. Fowler.

Steps proposed by the Alberta government for the conservation of gas in Turner Valley were outlined by N. E. Tanner, minister of lands and mines for Alberta.

S. A. Giraud Elected Director Of Humble Oil & Refining Co.

HOUSTON, Tex., Feb. 14.—S. A. Giraud, Humble Oil & Refining Co., Houston, was elected as a member of the board of directors at the company's annual

S. A. GIRAUD

stockholders meeting Monday. Mr. Giraud was chairman of the refining and marketing division in charge of refining and sales. He will continue in that capacity in addition to his directorship.

Present directors reelected were: R. L. Blaffer, H. C. Weiss, E. E. Townes, John R. Suman, James Anderson, H. H. Baker and L. T. Barrow.

Jackson Admits Selection of Friendly Court for Trial

WASHINGTON, D. C.—Robert H. Jackson, assistant attorney general and nominee for solicitor general, admitted to a senate judiciary subcommittee that he approved the Department of Justice policy of selecting friendly courts in government prosecutions. The question was raised by Senator Austin in a discussion of the Madison oil trial.

Department of Justice to Investigate Crude Prices

WASHINGTON, D. C., Feb. 14.—Department of Justice officials confirmed the report today that they were investigating complaints that crude oil prices in Texas are too high. Complaints have been made by independent refining interests that crude prices have been maintained artificially despite substantial reductions in prices for refinery products. The complaining refiners have contended that as a result they are operating at a loss.

It is understood the investigation will be started by the Dallas office of the department of justice.

Bell General Transit Announces Schedules From East Texas

Bell General Transit Co. of Dallas, Tex., has released three rate schedules for movement of crude from the East Texas field.

Schedule 1-A, Overton to Tyler, set the tariff at 3½ cents per barrel; schedule 2-A, Overton to Bullard station, 5 cents per barrel, and schedule 3-A, Overton to Smiths Bluff near Port Arthur, 12½ cents per barrel. The first two schedules were effective February 1 and the latter on February 5.

A.P.I. Estimate of Reserves Placed at 15,507,268,000 Bbls.

NEW YORK, Feb. 14.—The American Petroleum Institute made public Monday a report showing a new high total of proven petroleum reserves in the United States on January 1, 1938—15,507,268,000 bbls. This is 2,443,868,000 bbls. more than its estimate of January 1, 1937.

New reserves discovered in 1937 were estimated at 928,742,000 bbls., making the total 16,784,932,000 bbls. From this, the committee deducted 1,277,664,000 bbls. as an estimate of oil produced in 1937.

The report breaks down the proven reserves as follows:

California, 3,063,142,000 bbls.; Rocky Mountain states, 399,839,000; central and southern states, 11,508,205,000, and eastern states, 536,082,000 bbls.

The reserves of Texas were estimated as the largest, amounting to 8,247,928,000 bbls. California's reserves were placed in second position and Oklahoma, with 1,440,692,000 bbls., third.

Oil-World 1939 Exposition To Be Held April 24-29

The directors of the Oil-World Exposition have set the date for the oil show at Houston, Tex., for April 24 to 29, 1939, inclusive. This action is in accordance with the by-laws and with the desires of the directors to cooperate with the oil industry by not holding the exposition more frequently than every other year. By unanimous vote the directors appointed Ed G. Lenzner, general manager for the 1939 Oil-World Exposition.

Madison Arguments Postponed By Judge Until March 28

MADISON, WIS., Feb. 12.—Postponement of arguments on defense motions after verdict in the trial of major oil companies convicted of conspiracy to fix gasoline prices was announced by Federal Judge Patrick T. Stone today from March 24 to 28.

Continental Oil Co. Bonus to Employes to Be Repeated

PONCA CITY, Okla., Feb. 12.—Employes of Continental Oil Co. will again share with stockholders in the company's annual profits, under the 1938 bonus plan announced here today by President Dan Moran.

Continental made one of the largest bonus payments in the United States during 1937, distributing more than $770,000 among 5,076 employes, an amount equivalent to almost an extra month's salary for each employe.

The 1938 bonus plan, President Moran said, will be the same as that adopted for 1937.

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Price Plot

The bill proposing a tax on fuel oil for the benefit of the coal business has been before congress for years without getting anywhere. Its sudden prominence shows what can be gained by sticking to a scheme and getting the ear of the president.

In normal times it would be assumed that so transparent a trick could not be considered seriously, but the experience of the past five years has shown there are few limits to what can be forced through in an administration faced with declining revenues and unreduced expenses.

The $170,000,000 more tax from the oil industry so temptingly dangled by the sponsors of the bill may prove the controlling factor in the closing hours of a worn-out and confused congress if the oil industry and its customers do not call attention to the facts.

It is true the arguments against the tax are so apparent that any schoolboy can understand their significance. The bill proposes a levy of 1 cent a gallon, (42 cents a barrel), on all fuel oil used for generation of heat or power.

It is being promoted by the coal interests for the purpose of increasing the price and thereby restricting the use of fuel oil in the hope of widening their market.

Millions of oil consumers probably would continue to buy oil and pay the tax because of its advantages over coal. The half million owners of oil burners in homes would be penalized approximately $40,000,000. The hundreds of thousands of others, small wage-earners, who use oil in space heaters, and ranges, would find the tax meaning less of some other necessity

The railroads, whose financial perplexities are a national problem, would have to pay $25,000,000 a year more for their fuel oil. Add to this a tax bill of $35,000,000 on marine oil consumers, $5,000,000 each on the gas manufacturers and electric light plants and $35,000,000 to be paid by industrial customers. A tax on fuel oil would add also several millions to the cost of national defense unless the army and navy were exempted.

But the $170,000,000 the tax would add to the price of fuel oil would not be the whole story. Far from it. If the cost of using oil can be raised thus it may be assumed that the coal business, complaining of low prices, will lose no time in raising the price of coal.

This is the real purpose of the bill—hundreds of millions more from the consumers of coal while the government holds up the consumers of oil.

The pretense that the bill is in the interest of conservation of oil is a hollow absurdity. An incomplete estimate of oil reserves, with the data misinterpreted, is flashed at the White House as a threat of imminent shortage of petroleum.

Doleful prognostications of the exhaustion of our supply of oil, based on estimates which were subsequently proved to be wrong, have been exploded so often the industry no longer even shrugs its shoulders at them.

Known petroleum reserves in this country are the largest in the history of the industry. In addition, the industry today is better than ever qualified by scientific knowledge and experience to find additional reserves as they are needed.

Although far older than the oil industry, the coal business is seeking to offset its own inefficiency and mismanagement by handicapping another industry which has won millions of customers through operating efficiency and improving its products.

It is to these customers and the consumers of coal also that the fight against this fuel oil tax should be carried. They are the people who will have to pay the bill, one way or another.

ALASKA WILDCAT

(Continued from Page 35)

to be drilled lies almost entirely within the mountainous area. From Cold Bay to Portage Bay the coastal range is rather rugged and occupies a belt extending about 10 miles inland.

Petroleum Existence

The occurrence of petroleum in sedimentary rocks of the Alaskan Peninsula has been known for more than 60 years but until about 1920 only a small part of the peninsula had been mapped geologically or topographically. The presence of petroleum in sedimentary rocks is disclosed by numerous seeps at several places. Prominent seepages have been logged in the Cold Bay area and around Aniakchak Bay and Chignik. The seepages in the Cold Bay area in which this wildcat will be drilled are contained in two groups lying along the two lines of anticlinal folding and several prominent seepages have been found along the Bear Creek-Salmon Creek anticline in close proximity to the location. There are two prominent seepages on Pearl Creek anticline, another structure held by Standard, Tide Water Associated and Union. These seepages emerge from sandstone rocks of the Shelikof formation well down on the flank of the fold. In addition several points have been found where natural gas emerges several hundred feet apart at the foot of a bluff on the edge of a narrow valley in the East Fork of Kejulik River.

A change in porosity due to the coarseness of the sediments deposited, a variation in porosity due to the cementing material, and the presence of lenticular bodies of sandstone are all features that may be of prime importance in localization and accumulation of petroleum. The change in porosity and the presence of lenses of sandstone are likely to be of more importance in sediments deposited in shallow water and near the shore, such as most of the sediments in the Cold Bay district. Sediments laid down near the shore are usually of coarser grain than those deposited farther out but they may grade latterly into fine grained sediments without any distinct break and where they do there is a gradual change in the effective porosity of the rock and in its effect upon permeating liquids and gases. Sediments in the Cold Bay district are known to differ greatly within the district but it is impossible to predict just where the porosity has changed sufficiently to cause accumulation.

Additional Data

The sedimentary rocks occurring on the Alaskan Peninsula were deposited during the Mesozoic and Cenozoic eras and range with many interruptions in their sequence from the Upper Triassic to the Recent. A complete section of the sedimentary series does not occur at any single locality and correlation must be made from one part of the peninsula to another by fossil remains of animals and plants. The unconformity of subsurface conditions has made it rather difficult to complete geological reports with accuracy. For this reason it was found necessary to make regional surveys last summer to ascertain as far as possible the probable depth at which production might be expected and to determine the thickness of the Jurassic rocks in the Cold Bay region.

The joint party of geologists found a series of about 2,300 feet of beds exposed along the north shore of Cold Bay. The oil seepages in the Cold Bay region occur in the Upper Jurassic series of rocks which have been divided into the Shelikof and Naknek formations. The Naknek formation is the younger and is exposed at several points. The Shelikof formation is very thick and forms the coastal mountains between Cold Bay and Portage Bay and is present in the mountains west and southwest of Wide Bay.

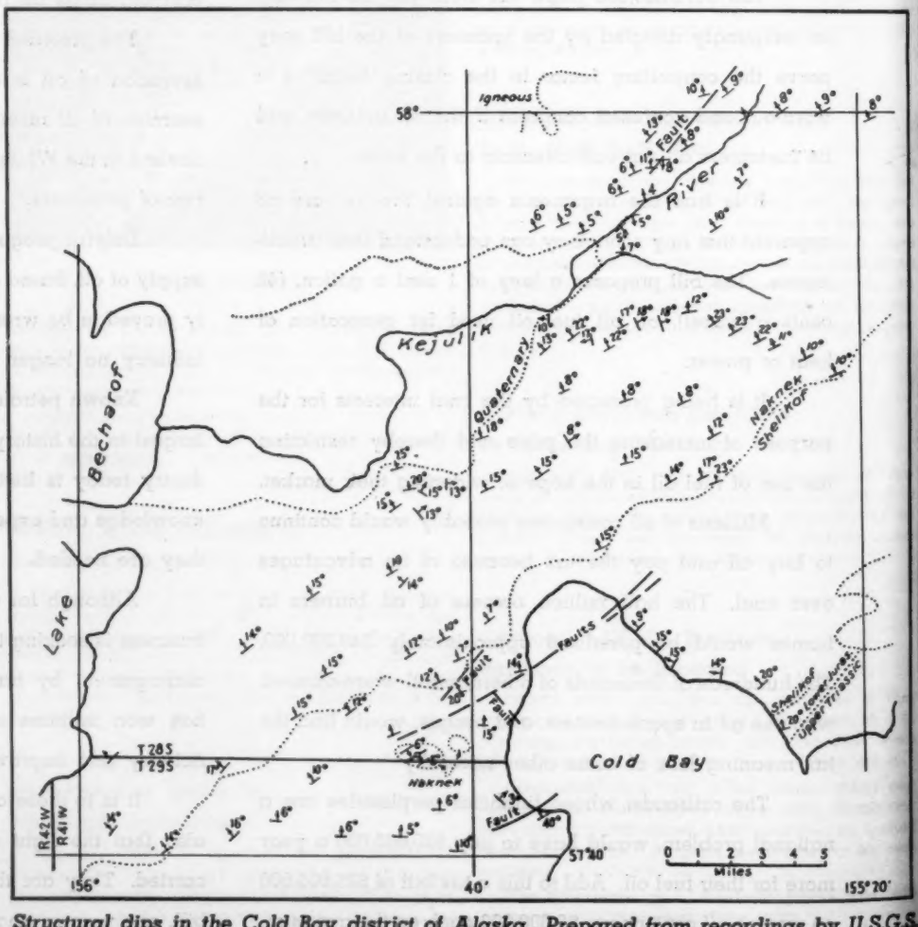
The Upper Triassic rocks that crop out on Cape Kekurnoi at the northeast entrance to Cold Bay are the oldest sedimentary rocks exposed on the Alaskan Peninsula. The Lower Jurassic rocks, the objective of the new test, occupy a few square miles in a narrow strip crossing the cape that separates Cold Bay from Alinchak Bay to the northeast. This strip is the only known area of Lower Jurassic rocks on the Alaskan Peninsula. There appears to be a strict conformity between the Lower Jurassic and Triassic rocks but the lack of fossils makes it difficult to determine the contact. This gradual grading is expected to cause some difficulty in drilling but on the other hand foraminifera may be more plentiful on top of the structure and recovered by coring. The sedimentary beds included in the Lower Jurassic are about 2,300 feet thick. The 1,500 feet at the bottom may be divided into two parts, a lower part consisting mainly of limestone and limey sandstone and shale and an upper part in which there is a narrow zone characterized by conglomerate and sandstone containing abundant bright red jasper pebbles, brightly colored greenstone particles and fragments of carbonaceous shale. This marker will no doubt bring much joy to the engineers and geologists working on the Cold Bay wildcat as it will provide a definite marker. The 800 feet at the top of the formation is composed of a black to rusty sandy shale with some thin beds of limestone. This section has few fossils but it is included in the Lower Jurassic.

The structure in the Cold Bay district is simple and characterized by large features that can be easily followed in the mountainous part. The sedimentary beds have a northeast strike and a dominant northwest dip but this general attitude is interrupted by at least two lines of folds and faults approximately parallel to one another and to the coast line. At Portage Bay the extension of the Wide Bay line of folding is seen as a plunging anticline that rises on the east side of the bay and spreads out within a short distance to form the Bear Creek-Salmon Creek anticline.

This anticline, which is conspicuous and well developed, extends from Portage Bay across the headwaters of Bear Creek and Salmon Creek and gradually flattens out near Rex Creek. The southeast flank of the anticline dips only about 4 degrees but the northwest flank dips about 16 degrees. The sediments exposed over the fold consist of sandy shale of Lower Shelikof age near the crest and progressively younger beds on the flanks, the Naknek formation cropping out far down on the northwest flank. The Shelikof is the only known oil bearing formation in this region and it is deeply cut by erosion on the crest of the anticline. The Bear Creek-Salmon Creek anticline flattens out northeast of Rex Creek and is succeeded near the head of Trail Creek by the Dry Creek fault. This fault cuts across the head of Cold Bay and two parallel faults appear on the northeast side of the bay. The south side of the fault has moved down relative to the north side.

Pearl Creek Dome

The Pearl Creek dome structure is slightly asymmetric and the axial plane is inclined to the southeast in the same direction as the other folds in the region. The southeast flank has a maximum dip of about 30 degrees but dips as high as 69 degrees have been recorded on the northwest flank. The rocks exposed over the Pearl Creek dome belong to the Naknek formation and between the crest of the dome and Mount Peulik about 4,000 feet of Naknek sediments are represented. Some shallow drilling has already been undertaken on the Pearl Creek dome but no conclusive test.



Structural dips in the Cold Bay district of Alaska. Prepared from recordings by U.S.G.S.

W. R. FINNEY

EXECUTIVE COMMITTEE

C. F. CAMP

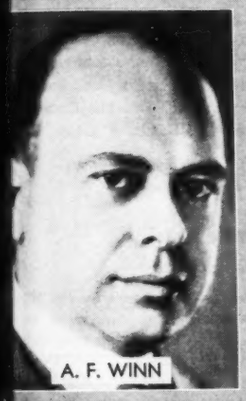
EARL SNEED

H. R. GRUBER

COMMITTEE CHAIRMEN FOR INTERNATIONAL PETROLEUM EXPOSITION MAY 14 TO 21 IN TULSA

These men are serving as chairmen of the various committees at work in directing the show, in preparing special exhibits and in securing attendance for the International Petroleum Exposition. An increase of 50 percent in exhibit space over all previous Expositions is already reported. One worthy addition to the coming Exposition is the new Hall of Science which will contain working models of scientific and technical developments costing $250,000 to construct. Reservations for rooms may be made by writing the Housing Bureau of the Exposition. Committee chairmen are:

Executive committee (left to right): H. R. Powers, Bethlehem Supply Corporation of Tulsa, secretary; Alf G. Heggem, president Oil Well Improvements Co., Tulsa, vice-president; W. G. Skelly, president, Skelly Oil Co., Tulsa, president; C. H. Pape, secretary and treasurer of the Selby Oil and Gas Co., Tulsa, treasurer; Frank O. Prior, president of the Stanolind Oil and Gas Co., Tulsa, director; W. M. Bovaird, president, Bovaird Supply Co., Tulsa, director; Wm. B. Way, general manager and Frank J. Hinderliter, president Hinderliter Tool Co., Tulsa, vice-president. Earl Sneed, Sneed Royalty Corp., Tulsa, housing bureau; H. M. Cosgrove, executive secretary of the Purchasing Agents Association of Tulsa, chairman, purchasing agents committee; James H. Gardner, president, Gardner Petroleum Corp., Tulsa, chairman of the foreign delegates committee; J. A. LaFortune, vice-president, Warren Petroleum Corp., Tulsa, chairman of the natural gasoline committee; C. F. Camp, secretary and treasurer, Arrow Drilling Co., Tulsa, drilling contractors committee; H. R. Gruber, vice-president in charge of oil country sales for the Union Wire Rope Corp., Tulsa, chairman, "old timers" committee; J. D. McCamey, director of safety, Carter Oil Co., Tulsa, safety day committee; Dr. Gustav Egloff, director of research, Universal Oil Products Co., of Chicago, chairman, scientific and technical committee of the Exposition; Luther H. White, chairman of the exploration committee of the exposition, manager of the land and geological department of the Deep Rock Oil Corp. of Tulsa; R. W. McDowell, vice-president, Mid-Continent Petroleum Corp., Tulsa, chairman, marketing committee; D. E. Buchanan, president, Hanlon-Buchanan, Inc., Tulsa, chairman, local entertainment and host committee; H. M. Stalcup, vice-president of the Skelly Oil Co., Tulsa, chairman, production committee; W. R. Finney, president of the Oklahoma Pipe Line Co., Tulsa, pipe line committee; A. F. Winn, traffic manager Skelly Oil Co., Tulsa, the transportation committee.


A. F. WINN

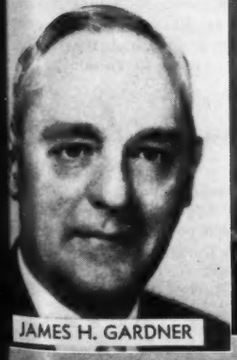
H. M. STALCUP

J. A. LaFORTUNE

H. M. COSGROVE

LUTHER WHITE

J. D. McCAMEY


JAMES H. GARDNER

R. W. McDOWELL

DR. GUSTAV EGLOFF

D. E. BUCHANAN

COOPERATIVE AGENCY

(Continued from Page 34)

are being offered them from day-to-day are prices at which they can safely store petroleum to supply their trade. The buyers of petroleum products, as well as sellers, are demoralized, and reasonable competition is being destroyed for both the refiner and the consumer.

Under this plan it is not expected that competition will be eliminated, even between the products sold by the general agency. It is expected, on the contrary, that the general agency will sell each refiner's products on the basis of a fair competitive price with the products of each other refiner employing the general sales agent. Each refiner will receive for each grade of petroleum products the price obtained for that grade, less the commissions to the selling agent, as provided in the selling agent's contract.

It will be the purpose of the agency to make competitive prices for the various grades and kinds of petroleum products offered by it that will enable each refiner to have equal opportunity, as nearly as conditions will permit, to move his products freely in competition with other products handled through the agency. It will be a further purpose to adjust prices in competition with other competing units in the same region as well as competing units outside of the region, supplying common markets, with a view of maintaining, and if possible increasing the percentage of petroleum products produced by subscribing refiners going from this region to the general consuming markets. The agency will also be compelled to adjust prices to meet competition of those companies producing petroleum products in and out of the region described herein, which do not sell through the agency, with a view of maintaining for its subscribing refiners as large a relative volume of business in this region as they now have. Under this plan, it is stated, competition will not only not be stifled, but it may even be intensified at certain points.

By adjusting orders between the different refiners who are short on certain grades and long on other grades of petroleum products, by seeking intelligent information as to the demand and competitive conditions, and by reducing the cost of selling, it is expected that dumping of petroleum products can be restricted and fair and intelligent competition maintained.

It is generally appreciated by all refiners in this region that in practically every market reached by the products to be sold through the agency, such products must reach the market in competition with products of differential pipe line refiners who have transportation advantages varying from one-eighth to 1¼ cents per gallon. It is estimated that less than 10 per cent of the petroleum products refined in this region is sold at points where the refiners of this region can reach the consuming market on equal or more favorable freight rates than apply from refineries in other regions with which they are in competition.

In addition to competition with products from major companies who will not sell through the agency and from competing districts, the large coal and gas interests are competing for the fuel requirements of both the industrial and domestic users in practically every market reached by fuel oils from this region. The public, it is said, is being confused by the extensive advertising campaigns of the major companies not selling through the agency and this publicity can only be met by intelligent cooperative advertising by the independent refineries of this region at a cost prohibitive to the individual refiner. The refiner who is content to sell his own products against all these odds cannot, it is evident, expect to survive this unequal contest. It is contended that the formation of the agency is in promotion of a sane and sensible competitive situation and permanently insures the subscribing refiners a place of their own in the market at the lowest possible cost.

Obituaries

L. H. McCORD, 30, died of heart disease at Hattiesburg, Miss. He was engaged as a geologist in Perry County, Mississippi, for Phillips Petroleum Co.

HILTON ALLEN PHILLIPS, 38, president of Hilton Phillips, Inc., Oklahoma City, which operates in the St. Louis field in Pottawatomie County, died last week of a heart attack.

M. H. LOBAUGH, 70, whose activities as an oil operator took him to fields in Texas, Pennsylvania, West Virginia, Ohio, Kansas and Kentucky, died at Eastland, Tex., February 11 after two years' illness.

D. B. (DON) MEGAHAN, widely known independent oil operator in Texas, Oklahoma and Illinois, was killed the night of February 2, 1938, in an automobile accident 12 miles west of Robinson, Ill.

C. O. GLEGHORN, 51, newly appointed manager of the Chicago manufacturers' sales department of B. F. Goodrich Co., died in Harper Hospital, Detroit, February 9. Death was caused by pneumonia.

ARTHUR G. EVANS, 59, assistant treasurer of the Gulf Refining Co., at Port Arthur, Tex., and a director of the Merchants National Bank, died suddenly February 9 while he served as a pallbearer at the funeral of a friend.

FRANK COLLINS, executive vice president of the National Supply Co., died at his home in Toledo, Ohio, Saturday, February 12, at the age of 67. He first became associated with the company on March 15, 1887, and has taken a most active part in the development and progress of the company during his 51 years of continuous service. As executive vice president of the National Supply Co. and as president of the Toledo Pipe Threading Machine Co., Mr. Collins enjoyed a wide circle of friends in the petroleum industry.

FRANK COLLINS

BARNEY TERRELL, 39, scout for Stanolind Crude Oil Purchasing Co., and formerly in charge of the gasoline plant at Drumright, Okla., died suddenly at Oklahoma City, February 7. He had been with the Indiana company for 20 years.

T. B. GREENE, vice president of Buckeye Pipe Line Co. for many years, died in Lima, Ohio, February 12. He was one of the oldest men in the service of the organization. He was a division superintendent at Marietta, Ohio, when he was advanced to the Lima headquarters.

SAMUEL J. MEALS, 82, said to have been the second oldest oil driller in point of service in the United States, and inventor of various tools used in oil fields, died at Wichita Falls, Tex., February 9. He drilled for oil in Pennsylvania, Texas and Mexico and prospected for gold in Alaska. His first drilling experience began in 1872 in Butler County, Pennsylvania, when he left an apprenticeship in a blacksmith shop to become a tooldresser on the Charlie St. John and Ed Landis well in that state.

JAMES A. SIVALLS, 71, died at his home in Bartlesville, Okla., February 8. He was born in Woodville, Ohio. Moving to Findlay, Ohio, in young manhood he became associated with Black Brothers, tank manufacturers. He moved to Bartlesville 35 years ago on the founding of the firm of Black, Sivalls & Bryson, Inc. Two sons, Charles, of Oklahoma City, and Robert, of Seminole, Okla., are connected with the company.

Hospital for Turner Valley Field Sponsored by Oil Association

TURNER VALLEY, Alberta.—Sponsored by the Oil and Gas Association of Alberta, a hospital will be constructed in Central Turner Valley, primarily for oil field workers, who previously had to secure treatment at High River or Calgary. Arrangements have been made for a physician and a trained nurse to take charge. The project has the backing of a number of the larger oil companies. Work will commence early this spring.

Magnetic Storms

TUCSON, Ariz.—The U. S. Coast and Geodetic Survey observatory reports a severe magnetic storm began on January 25 at 6 a.m. and continued until 3 p.m. January 26, central standard time; a moderate magnetic storm began on February 8 at 5 a.m. and ended February 10 at 8 a.m. A third magnetic storm began at 7 p.m., February 10 and ended on February 11 at 5 a.m., central standard time.

Payne County Lease Sale

Sale of leases within one-half mile of the new Ramsey pool in Payne County, Oklahoma, to E. H. Moore of Tulsa for $200,000 was announced Tuesday. The leases are in sections 18-18-2e, 12-18-1e, 19-18-2e, and 24-18-1e, and were bought from British American Oil Co., Texas Co., and Guy M. Troutman of Tulsa.

Big Gas Well at Cement

Magnolia Petroleum Co. No. 10 Niles, SW SW NW section 36-6-10w, Cement pool, Caddo County, Oklahoma, gauged 203,500,000 feet of gas daily when opened for test Tuesday. It had 1,680 pounds rock pressure, total depth 4,450 feet. This is thought to be the second largest gas well ever completed.

Bureau of Mines Report on Operations in 1937

The Bureau of Mines report for December shows the downward trend of crude oil production was continued in that month when the daily average output was 3,438,000 bbls., compared with 3,473,500 bbls. in November and 3,152,400 bbls. in December, 1936. The preliminary total for production for 1937 is 1,277,653,000 bbls., or 16 per cent above the final 1936 total of 1,099,687,000 bbls.

The decline in output in December, 1937, was well distributed among the states and only a few registered increases. The largest decline in daily average output, 17,500 bbls., was recorded in Texas, the next largest, 10,300 bbls., in Oklahoma. California's output continued to increase, although the gain in December was small. Louisiana and New Mexico made small gains, but production in Kansas declined for the fifth successive month. Production in Arkansas was off slightly despite a material increase in the Shuler area.

The pressure to reduce crude runs to relieve the gasoline stock situation apparently bore fruit in December as the daily average throughput declined from 3,321,000 bbls. in November to 3,173,000 bbls. As this decline was far larger than that in production, the situation as regards crude oil stocks changed from one of material withdrawals to small additions. The net change for 1937 was an increase of about 17,500,000 bbls., the total on hand December 31, 1937, being 306,084,000 bbls.

The indicated domestic demand for motor fuel in December, 1937, was 39,457,000 bbls., a daily average of 1,273,000 bbls. This was slightly under the demand of a year ago, largely because December, 1937, was generally colder and lacked the speculative buying of December, 1936. The domestic demand for 1937 was 518,760,000 bbls., or 8 per cent larger than in 1936. Stocks of gasoline increased 6,362,000 bbls. in December, reaching total of 76,990,000 bbls. at the close of the year, compared with 62,914,000 bbls. on hand the year previous.

United States Supply and Demand—Crude Oil (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Indicated domestic demand‡	Exports	Stocks refinable crude Dec. 31
1937	1,305,137,000	1,287,632,000	*17,505,000	*1.4	1,277,653,000	27,484,000	1,219,946,000	67,686,000	306,084,000
Daily average	3,576,000	3,528,000	48,000	....	3,500,000	75,000	3,342,000	186,000	.....
1936	1,132,014,000	1,107,977,000	*24,037,000	*2.2	1,099,687,000	32,327,000	1,057,664,000	50,313,000	288,579,000
Daily average	3,101,000	3,037,000	66,000	....	3,013,000	89,000	2,898,000	138,000	.....
Increase, 1937	173,123,000	179,655,000	.....	....	177,966,000	†4,843,000	162,282,000	71,373,000	17,505,000
	15.3%	16.2%	.....	....	16.2%	†15.0%	15.3%	34.5%	6.1%

Supply and Demand—Refinery Products—Motor Fuels (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks Dec. 31§
1937	570,979,000	556,734,000	*14,245,000	*2.6	570,979,000	.....	518,760,000	37,974,000	81,748,000
Daily average	1,564,000	1,525,000	.....	....	1,564,000	.....	1,421,000	104,000	.....
1936	516,266,000	510,252,000	*6,014,000	*1.2	516,266,000	.....	481,606,000	28,646,000	66,969,000
Daily average	1,414,000	1,398,000	.....	....	1,414,000	.....	1,320,000	79,000	.....
Increase, 1937	54,713,000	46,482,000	.....	....	54,713,000	.....	37,154,000	9,328,000	14,779,000
	10.6%	9.1%	.....	....	10.6%	.....	7.7%	32.6%	22.1%
Kerosene									
1937	65,308,000	63,858,000	*1,450,000	*2.3	65,308,000	.....	54,951,000	8,907,000	7,083,000
1936	56,082,000	58,364,000	2,282,000	3.9	56,082,000	.....	51,428,000	6,936,000	5,633,000
Increase, 1937	9,226,000	5,494,000	.....	....	9,226,000	.....	3,523,000	1,971,000	1,450,000
	16.5%	9.4%	.....	....	16.5%	.....	6.8%	28.4%	25.7%
Gas Oil, Distillate Fuels and Residual Fuel Oil¶									
1937	497,709,000	487,142,000	*10,567,000	*2.2	474,290,000	23,419,000	441,814,000	45,328,000	117,585,000
1936	448,589,000	445,564,000	*3,025,000	*.7	429,606,000	18,983,000	410,641,000	34,923,000	107,049,000
Increase, 1937	49,120,000	41,578,000	.....	....	44,684,000	4,436,000	31,173,000	10,405,000	10,536,000
	10.9%	9.3%	.....	....	10.4%	23.4%	7.6%	29.8%	9.8%
Gas Oil and Distillate Fuels									
1937	147,248,000	147,401,000	153,000	.1	146,706,000	542,000	117,377,000	30,024,000	22,566,000
1936	126,088,000	123,245,000	*2,843,000	*2.3	125,906,000	182,000	102,757,000	20,488,000	22,813,000
Increase, 1937	21,160,000	24,156,000	.....	....	20,800,000	360,000	14,620,000	9,536,000	†247,000
	16.8%	19.6%	.....	....	16.5%	.....	14.2%	46.5%	†1.1%
Residual Fuel Oils									
1937	350,461,000	339,741,000	*10,720,000	*3.2	327,584,000	22,877,000	324,437,000	15,304,000	95,019,000
1936	322,501,000	322,319,000	*182,000	.1	303,700,000	18,801,000	307,884,000	14,435,000	84,236,000
Increase, 1937	27,960,000	17,422,000	.....	....	23,884,000	4,076,000	16,553,000	869,000	10,783,000
	8.7%	5.4%	.....	....	7.8%	21.7%	5.4%	6.0%	12.8%
Lubricating Oils									
1937	35,321,000	34,295,000	*1,026,000	*3.0	35,321,000	.....	23,374,000	10,921,000	7,512,000
1936	30,927,000	31,014,000	87,000	.3	30,927,000	.....	22,323,000	8,691,000	6,942,000
Increase, 1937	4,394,000	3,281,000	.....	....	4,394,000	.....	1,051,000	2,230,000	570,000
	14.2%	10.6%	.....	....	14.2%	.....	4.7%	25.6%	8.2%
Petroleum Wax (Lbs.)									
1937	558,289,000	523,931,000	*34,358,000	*6.6	521,360,000	36,929,000	292,489,000	231,442,000	144,992,000
1936	489,589,000	488,830,000	*759,000	*.2	472,920,000	16,669,000	301,488,000	187,342,000	115,434,000
Increase, 1937	68,700,000	35,101,000	.....	....	48,440,000	20,260,000	†8,999,000	44,100,000	29,558,000
	14.0%	7.2%	.....	....	10.2%	121.5%	†2.9%	23.5%	25.6%

*Excess supply. †Decrease. ‡Crude oil only. §Includes finished and unfinished refinery gasoline and natural gasolines. ¶Gas oil and fuel oil equals gas oil and distillate fuels plus residual fuel oils. Note: Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

	Total imports§	Total exports§	Total crude to stills	Per cent yield gasoline‡	Nat. gasoline production	Total supply all oils*	Total demand all oils*	Stocks all oils Dec. 31
1937	57,152,000	172,813,000	1,183,440,000	47.2	48,550,000	1,386,141,000	1,340,801,000	563,986,000
Daily average	159,000	473,000	3,242,000	....	133,000	3,798,000	3,673,000	.....
1936	57,104,000	131,994,000	1,068,570,000	47.2	42,770,000	1,202,063,000	1,224,748,000	519,229,000
Daily average	156,000	362,000	2,928,000	....	117,000	3,293,000	3,355,000	.....
Increase, 1937	48,000	40,819,000	114,870,000	....	5,780,000	184,078,000	116,053,000	44,757,000
	.8%	38.1%	10.7%	....	13.5%	15.3%	9.4%	8.6%

*Total all oils includes crude and refined products, natural gasoline and benzol. †Decrease. ‡Includes natural gasoline blended at refineries. §Includes crude oil and refinery products. In case of imports includes receipts in bond and for domestic use. All data based on Bureau of Mines reports.

Natural Gas News

Tax Carbon Black in Texas Regardless of Manufacture

AUSTIN, Tex.—Regardless of how manufactured, carbon black is taxable in Texas, was the decision of the Third Court of Civil Appeals in affirming the case of Peerless Carbon Black Co. from Travis County. The company had denied liability because it used a cylinder method of production not included within the three methods set forth in the taxing act, channel, disc or plate.

The state contended the three set out were merely an enlargement of all manufacturing methods. This position was sustained.

Peerless is held liable for the tax which varies. It is one-twelfth of 1 cent per pound on carbon black selling in the market for less than 4 cents per pound and above 4 cents the tax is 3 per cent.

Dry Gas Production Higher In Texas During December

AUSTIN, Tex. — From the 327 gas reservoirs in Texas there were 2,943 wells producing 2,032,955,000 feet of gas daily during the month of December, 1937, according to a statement released by the railroad commission. From these wells 1,354,981,000 feet of sweet gas and 677,974,000 feet of sour gas were produced. This dry gas was disposed of as follows: 27.41 per cent to pipe lines for domestic and industrial light and fuel; 5.77 per cent for lease development and operation, including gas-lift, repressuring and drilling, and 66.82 per cent to gasoline plants for gasoline extraction. Gasoline plant residues were also delivered to pipe lines and used for lease development and carbon black manufacture.

The 136 gasoline plants operating and reported processed a total of 2,267,773,000 feet of gas daily from 35,785 oil wells and 1,073 gas wells. Dividing this total gas into type gases, there were 908,021,000 feet of casinghead, 681,704,000 feet of dry sweet gas and 678,048,000 feet of dry sour gas.

Of the total gas processed by the gasoline plants, 5.77 per cent was lost during the extraction of gasoline, 15.72 per cent was used for plant and lease purposes, 38.92 per cent was sold to carbon black plants, 28.91 per cent was disposed of to pipe lines and 10.68 per cent was blown to the air, being in equivalent casinghead gas.

The gasoline plants recovered 2,053,224 gallons of 26-70 grade gasoline (in equivalent) and 10 plants produced 310,895 gallons of butane-propane daily. The average gallons of gasoline recovered per 1,000 feet of gas processed was .905.

The 40 carbon black plants reported 882,521,000 feet of residue gas burned daily. From this gas 1,262,128 pounds of carbon black were produced daily. This is an average of 1.430 pounds of carbon black per 1,000 feet of residue gas produced.

Important Test Case on Oil Companies Supplying Gas

AUSTIN, Tex.—The Supreme Court has under consideration an important gas utility rate case, Humble Oil & Refining Co. vs. Railroad Commission of Texas and others from Travis County.

"There cannot be found on the law reports another case like this," said counsel for Humble in denying the company had become a utility by reason of a contract it made in supplying gas from the Raccoon Bend field in Austin County to the M. & M. Pipe Line Co. which transported it to consumers.

When the case is decided it will establish a precedent on rate regulation where oil companies sell their residue gas.

The railroad commission held Humble's contract made it a public utility subject to regulation and it reduced to 5 cents per 1,000 feet, the maximum wellhead price for gas at Raccoon Bend.

An appeal to the District Court brought judgment in favor of Humble and injunction preventing enforcement of the commission's orders. This was reversed by the Austin Appellate Court which held the contract made Humble a public utility.

Humble complained "there cannot be found another case where a court uses a contract as a fact to give rise to a status and resulting duty and then holds that the contract must be stricken down because the things required to be done under the contract are inconsistent with the duty of one occupying the status claimed to have been created only by the contract."

Hearing at Amarillo Probable On Sour Gas Proration Order

AUSTIN, Tex.—Ernest O. Thompson, member of the railroad commission, said a hearing probably would be ordered in Amarillo to consider the request of Phillips Petroleum Co. for a Panhandle sour gas proration order.

Unsuccessful in its initial order under the gas conservation act to prorate both sweet and sour gas, the commission later promulgated a sweet gas proration order applicable to the Wheeler County area.

Mr. Thompson received from Don Emory, vice president of Phillips, an insistent request for immediate promulgation of a sour gas order, expressing belief one could be issued without a hearing. Mr. Thompson said he believed a hearing should be conducted.

Fort Worth Rate Case Is Returned to State Courts

AUSTIN, Tex.—The Fort Worth gas rate case, brought by the attorney general to force compliance by the Lone Star Gas Co. of an order of the railroad commission lowering charges, has been remanded by Federal District Judge Robert J. McMillan to State Court for trial.

Validity of an order reducing Fort Worth burner tip rates retoractive to August 7, 1935, is involved. The city ordinance ordering a reduction was adopted August 7, 1935, while on August 24, 1937, the commission order setting a rate lower than charged by the company but higher than that sought by the city was entered. The reduction is calculated at about $350,000 a year and the retroactive refunds would amount to $700,000.

A.G.A.E.M. Annual Meeting At White Sulphur Springs

Several hundred manufacturers of gas appliances, equipment, and accessories, from all parts of the United States and Canada will meet in White Sulphur Springs, W. Va., May 25 at the annual convention of the Association of Gas Appliance and Equipment

EXECUTIVE COMMITTEE OF GAS MEASUREMENT SHORT COURSE

Front: W. H. Carson, L. G. Rheinberger, Miss Kate A. Niblack, A. M. Crowell, R. D. Hanley, J. H. Satterwhite, Gilbert Estill (at desk). Rear: E. H. Poe, R. D. Turner, W. F. Lowe, R. L. Rountree, G. W. McCullough, C. A. Gibson, W. R. McLaughlin, G. B. Lane, Earl Kightlinger, Norris Plank, and R. M. Schofield

The executive committee of the Southwestern Gas Measurement Short Course met in Norman, Okla., to make definite plans for the 1938 school to be held April 19 to 21. Gilbert Estill, Oklahoma Natural Gas Co., Tulsa, general chairman, presided during the morning session, and L. G. Rheinberger, Sinclair Prairie Oil Co., Tulsa, chairman of the program committee, presided in the afternoon. A bulletin of the proceedings of the 1938 school will be mailed to each person who registers.

G. W. McCullough, Phillips Petroleum Co., Bartlesville, Okla., was appointed chairman of the publication committee. J. H. Page of the gas department of the Kansas Corporation Commission was unanimously elected a member of the executive committee. Other members of the executive committee are W. H. Carson, University of Oklahoma, Norman, chairman of banquet, entertainment and local arrangements committee; R. D. Hanley, Magnolia Petroleum Co., Dallas, Tex., chairman of exhibits committee; Miss Kate A. Niblack, Oklahoma Utilities Association, Oklahoma City, chairman of registration and publicity committee; and Earl Kightlinger, Arkansas-Louisiana Gas Co., Shreveport, La., chairman of the practical methods committee for the course.

Other committee members are E. M. Myers, Corporation Commission, Oklahoma City; A. M. Crowell, Texas Railroad Commission, Austin, Tex.; E. H. Poe, secretary of Natural Gas Department of American Gas Association, Dallas, Tex.; William F. Lowe, secretary of Natural Gasoline Association of America, Tulsa; J. H. Satterwhite, American Meter Co., Tulsa; W. R. McLaughlin, Pittsburgh Equitable Meter Co., Dallas, Tex.; G. B. Lane, Foxboro Co., Dallas, Tex.; George P. Bunn, Phillips Petroleum Co., Bartlesville, Okla.; Max Watson, Canadian River Gas Co., Amarillo, Tex.; Fay C. Walters, Panhandle Eastern Pipe Line Co., Kansas City, Mo.; R. L. Rountree, United Gas Public Service Co., Houston, Tex.; C. A. Gibson, Cities Service Gas Co., Bartlesville, Okla.; Norris Plank, Shell Petroleum Co., Tulsa, and R. M. Schofield, Lone Star Gas Co., Dallas, Tex.

The next meeting will be held at the Biltmore Hotel in Oklahoma City during the annual convention of the Oklahoma Utilities Association on March 21, when Mr. Rheinberger will present the program for approval.

Manufacturers, it has been announced by Merrill N. Davis, president of the association, and executive vice president of the S. R. Dresser Manufacturing Co., of Bradford, Pa.

During the three-day convention the delegates of major industrial manufacturing companies will discuss technical, promotional, and other matters of national importance in the gas appliance industry.

Arkansas-Louisiana Gas Co. Using Odorant at Shreveport

SHREVEPORT, La.—The placing of an odorant in natural gas used in Shreveport has been started by Arkansas-Louisiana Gas Co. The odor will serve as a warning in case of leaks. The odor is created by "calodorant," a volatile oil which is not noticeable when the gas in burning.

The gas company reported a few hours after the process had started that no reports of leaks had been received. Persons noticing the distinctive odor from the gas are requested to notify the gas company and to arrange for repairs with their plumbers.

Pipe Line Work

Southern Pipe Line Corporation Will Construct Line in Texas

AUSTIN, Tex.—The Southern Phillips Corp. has been granted a permit to do business in Texas. It is a subsidiary of Southern Minerals Corp. and Phillips Petroleum Co., which jointly have also formed the Southern Pipe Line Corp., having as its purpose the gathering, transportation and marketing of crude oil from the Turkey Creek field in Nueces County.

The company will construct 6½ miles of 6-inch pipe line from the field to its deep water terminals at Corpus Christi. It will also build gathering lines and storage tanks, it was stated. The home office of the new company is Pittsburgh, Pa., with Texas office at Corpus Christi.

Standard of Louisiana to Lay Line From Cotton Valley

Standard Oil Co. of Louisiana will begin shortly on a 10-mile, 4-inch line from its deep production in the Cotton Valley field of North Louisiana to the Willer tank farm, east of the field. Right of way is being secured.

Dehydration Plant Completed

A new dehydration plant has been completed by Canadian River Gas Co. near the Canadian River, northwest of Amarillo, Tex., to dry the gas passing through the main line to Pueblo and Denver.

Natural Gasoline

Natural Gasoline Production Lowered During December

The daily average output of natural gasoline declined in December, 1937, according to the monthly report prepared by the Bureau of Mines. The average in December was 5,833,000 gallons, a decline of 71,000 gallons from November. The principal decreases occurred in the Panhandle, Oklahoma City, and Kettleman Hills fields. The preliminary figure of production in 1937 was 2,039,100,000 gallons, or 14 per cent over the final total for 1936.

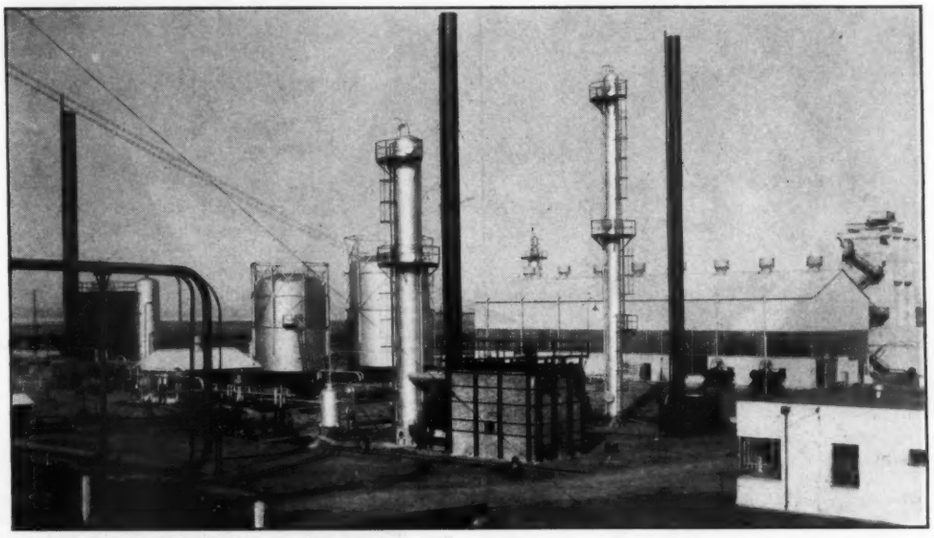
Production of the various districts during the month, in gallons, was as follows: Appalachian, 7,400,000; Illinois, Michigan, Kentucky, 1,120,000; Oklahoma, 42,789,000; Kansas, 5,036,000; Texas, 54,139,000; Louisiana, 8,964,000; Arkansas, 1,115,000; Rocky Mountain, 6,530,000; and California, 53,717,000.

Stocks at refineries, and plants and terminals decreased 16,338,000 gallons in December, or from 216,174,000 gallons the first of the month to 199,836,000 gallons on December 31. This total compared with 170,310,000 gallons on hand on December 31, 1936. The principal decrease was noted in stocks at plants and terminals, which declined almost 11,000,000 gallons.

Shipments to jobbers and retailers and exports during the month totaled 25,074,000 gallons, or 8 per cent more than in November. The greater part of this increase was in exports, which were 13,818,000 gallons compared with 11,424,000 gallons in November. Vapor pressures of all major shipments except exports increased in December, the weighted average vapor pressure for December being 21.4 pounds as compared with 21.3 pounds in November.

Refinery Expansion

HYDROGENATION PLANT PLACED IN OPERATION ON WEST COAST



LOS ANGELES, Calif.—A new hydrogenation plant constructed primarily for the production of high-octane aviation gasolines has been completed at the Richmond refinery of Standard Oil Co. of California. The plant, which was the first to be completed on the West Coast, went into operation shortly after the first of the year.

Polymers produced by the new process recently developed and installed at Richmond are charged to the hydrogenation unit, and through addition of hydrogen a base stock is produced which forms the base for an aviation fuel of 100 plus octane rating. The hydrogenation plant is licensed by the Hydro Patents Co. and is designed to operate at a pressure of 3,500 pounds per square inch. The rated capacity of the plant, shown in the accompanying photograph, is approximately 1,000 bbls. per day of base stock. It is also designed for the hydrogenation of other products.

The new plant is the fourth to be completed in the United States. Refineries in which the other plants are located are: The Baton Rouge plant of Standard Oil Co. of Louisiana, Gulf Refining Corp.'s unit at Port Arthur, and the Bayonne, N. J., plant of Standard Oil Co. of New Jersey.

New Polymerization Unit Well Under Way at Baton Rouge

BATON ROUGE, La.—Construction of a new polymerization unit in the Standard Oil Co. of Louisiana refinery here is now well under way, and is expected to be completed in April. The unit will be of the catalytic type and will have a daily capacity of 800 bbls. of high-octane gasoline. Construction is being done by Arthur G. McKee & Co.

Monthly Refiners Meeting Held at Shreveport, La.

SHREVEPORT, La.—Questions and answers were the order of the day at the regular monthly meeting of the technical group of the Ark-La-Tex division of the Western Petroleum Refiners Association, which was held here February 11 in the Washington-Youree Hotel. Subjects discussed included problems dealing with plant operation and maintenance. Treating, a recurring and ever-important question among refiners, held an important spot in the evening's deliberations; and the salt removal problem came in for its share of the discussion. Prominent also were discussions pertaining to lubricating oils and problems of lubrication. A. W. Trusty, chief chemist of Arkansas Fuel Oil Co., of Shreveport, served as chairman at the February meeting.

Exports of Montana Crude To Canada Show Decline

The State Conservation Board of Montana reports crude oil exports to Canada dropped in December to a new low of 14,198 bbls. Storage at the end of December was 1,389,270 bbls., a gain of 24,062 bbls.

Figures for 1937 from preliminary reports indicate that the campaign for the use of gasoline from Montana crude refined in the state is having some effect. Crude runs by Montana refiners during the year established a high record of 3,471,781 bbls., as against 2,634,454 bbls. in 1936, and 1,803,294 bbls. in 1935. Gasoline sales in Montana in December amounted to 7,312,212 gallons, of which 5,911,569 gallons were refined in the state and 2,400,643 gallons were imported. Montana refiners exported during the month 1,480,275 gallons in addition to sales in the state.

Gasoline sales for the year will be approximately 113,872,220 gallons, an increase of 5,781,217 gallons, as compared with 1936. Of the 1937 sales, 65,152,958 gallons were Montana made and 48,719,262 gallons were imported. Montana refiners exported 19,997,920 gallons, indicating total production in the state of 85,150,878 gallons.

Important Changes Announced in Texas Co. Producing Division

Appointments and changes in the organization of Texas Co. of Delaware were made in the past week by President W. S. S. Rodgers, and announced by L. E. Barrows of Houston, Tex., manager of the producing department:

E. R. Filley, of Tulsa, manager of the Oklahoma-

E. R. FILLEY

Kansas division, becomes assistant manager of production, with headquarters in Houston; H. N. Pardee becomes manager of the Oklahoma-Kansas division succeeding Mr. Filley, and M. J. Heald succeeds Mr. Pardee as assistant manager of the Oklahoma-Kansas division, with headquarters in Tulsa. All are effective March 1.

H. S. Cole, Jr. becomes assistant manager of the

H. N. PARDEE

West Texas division, with headquarters in Fort Worth, Tex., effective February 15.

W. C. Kneale becomes district superintendent in the Illinois-Indiana field with headquarters in Mount Vernon, Ill., and will be succeeded as district geologist by B. Maxwell Miller, who will have headquarters in Mattoon, Ill.

THE MARKETS*

CRUDE OIL: *Plans to reduce Oklahoma production to 500,000 bbls. daily, retroactive to first of month, is helping crude situation in that state and Kansas, where oil has been going to storage due to reduced refinery purchases. Texas market appears firm with exception of East Texas, where some spot crude is available.*

REFINERY: *Reduction in Mid-Continent natural gasoline prices to 2 cents per gallon or less most important development. Refinery gasoline prices steady, with third-grade quotations slightly higher at a few points. All grades of residual and overhead fuel oils freely offered. Lubricants inactive.*

TANK-WAGON AND POSTED DEALER: *Changes confined to few scattered points, although retail gasoline market considered weak at many large consuming centers.*

FINANCIAL: *Average quotations moved within range of 1.5 points for week. Average of 30 representative stocks for week ending February 12: High, 28.74; low, 27.21; close, 28.42. Average for week ending February 5: High, 28.31; low, 26.76; close, 27.75.*

**Detailed information in Market Section.*

Third World Petroleum Congress To Be Held in Berlin in 1940

At a meeting of the Permanent Council of World Petroleum Congresses held in Paris on January 22, under the presidency of Col. L. Pineau, president of the council, representatives of the following countries were present: Belgium, France, Germany, Great Britain, Holland, Rumania, and the United States.

The Permanent Council unanimously accepted the invitation of the Deutsch Gesellschaft fur Mineraloiforschung, presented by Prof. L. Ubbelohde, to hold the third World Petroleum Congress in Berlin during May or June, 1940. In accepting this invitation, the Permanent Council desired to record its appreciation of invitations received from organizations in the United States, Austria, and Holland, respectively, to hold the congress in those countries.

John B. Kelsey Celebrates His One Hundredth Birthday

John B. Kelsey celebrated his hundredth birthday anniversary at a family gathering at Harlingen, Tex., Monday, February 14. He is the father of Dana H. Kelsey, Tulsa, vice president of Sinclair Prairie Oil Co., and a widely known oil man in the Mid-Continent area, who traveled to Harlingen for the event.

John B. Kelsey was born at Ithaca, N. Y., in 1838, being 21 when Drake drilled the discovery well. He served in the Civil War and was a prisoner in Libby prison. One of his favorite recollections is a meeting he once had with Abraham Lincoln. Incidentally, he voted for Lincoln for president.

Mr. Kelsey is an oil man in his own right, having served the Prairie Oil & Gas Co. in Oklahoma for many years. The third Kelsey generation is represented in the oil business by John H. Kelsey, in charge of the Sinclair Prairie land office at Midland, Tex.

The elder Mr. Kelsey drives his car into Harlingen every day, which gives testimony as to his present physical condition. He is prominent in Rio Grande Valley affairs, where he has lived for the past 15 years.

Tenth International Chemistry Congress at Rome, May 15-21

The tenth International Congress for Chemistry, under the patronage of the International Chemical Union, will be held in Rome May 15-21. Prof. N. Parravano is president.

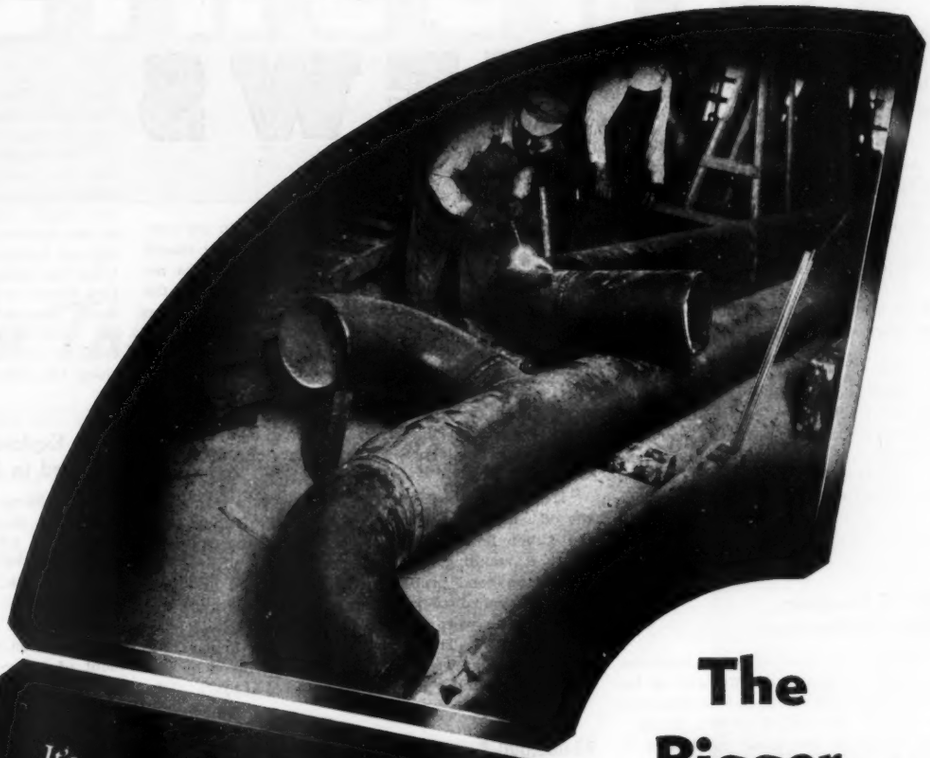
WEST CENTRAL TEXAS OIL SCOUTS

West Central Texas oil scouts, in their first meeting since reorganization following transfer of several members, are pictured in their weekly check at the Abilene Hilton Hotel.

Mr. George succeeded P. G. (Pete) Booth as president, Mr. Booth, who was scout for Humble, transferred to the land office in Wichita Falls. Mr. Pierce replaced John Mouser, who recently took a position as land man for Turman Oil Co., Tulsa; and Mr. Robinson succeeds G. A. Plummer, transferred to K.M.A. district.

The eight major company scouts cover 38 counties, east to Rockwell, southeast to Burnett, southwest to Schleicher and northwest to Stonewall. Logs are maintained on approximately 150 wells, chiefly in wildcat areas.

Joe Sauer, Indian Territory Illuminating Oil Co.; Billy Maloney, Gulf Oil Corp.; C. C. George, Texas Co., newly elected president; J. G. Roe, Humble Oil & Refining Co., new secretary-treasurer; Joe Clingan, Shell Oil Corp.; Ellis Earle, Phillips Petroleum Co. Standing: Tod Eshleman, Abilene Elevation Service; Bob Robinson, Lone Star Gas Co.; Frank Pierce, Sinclair Prairie Oil Co., and Clint Ledebur, Forest Development Corp.



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INTERNATIONAL NEWS

Reports of Oil Discovery on Chile's Easter Island

Dispatches were received in this country last week relating to the discovery of oil production indications on Easter Island, Chile's distant territory in the Southern Pacific. No details accompanied the reports reaching this country, since, it was stated, the Chilean naval authorities were carefully guarding information until authenticity and potential value could be ascertained.

Easter Island is 2,300 miles west of the Chilean Coast and is the most eastern of the Polynesian islands.

The reports were so meager that it was not disclosed whether indications of oil were the result of actual drilling or whether an exploratory party may have uncovered seepages. So far as could be learned in New York there is no drilling under way on Easter Island and, therefore, it was assumed that the reports were based on the presence of seepage oil or perhaps on evidence as intangible as the indications of structure.

Political Power of Mexican Labor Syndicates Is Growing

The bitterly disputed question of wage increases and social benefits for workers in the Mexican oil industry remained last week in the hands of the Supreme Court. Developments in Mexico, however, indicate that the political power of the labor syndicates is growing daily, and has reached a point beyond control of the administration. Under existing conditions in Mexico, the oil companies are in a less hopeful attitude over the prospect of winning a compromise decision from the court.

T. R. Armstrong of Standard Oil Co. of New Jersey, returned from Mexico last week and reiterated that operating under the terms of the Federal Labor Board's award would be impracticable, as it would mean constant interference in the management of the companies.

"The situation," Mr. Armstrong pointed out, "was deadlocked by reason of a fundamental misconception of the industry's capacity to survive under the exorbitant stipulations of the Federal Labor Board's order. The syndicates and the Federal Labor Board base their case on two theories, both of which, I consider, are absolutely unworkable. The first theory is that the only criterion as to what pay, and other concessions, labor should receive is the maximum capacity of the industry to yield. The second theory is that the syndicates should have a controlling voice in administrative matters which are essentially the obligation of management.

"The oil companies' offer, based on noninterference in management and the assumption that no burdens in addition to those already put on the industry will be imposed, is several times the average real wage elsewhere in Mexico. The present rates paid by the privately-owned oil companies are considerably in excess of those paid by the government-owned oil company. It was freely admitted by the conference on the other side that further increases would add to the discontent of the remaining 98 per cent of the country's workers. Nevertheless, those with whom I talked seemed unwilling to assume the task of clearing away the unsound premise upon which the Federal Labor Board's award is based. The trouble appears to be that the political situation is so closely involved as to make it part of the policy of the government to deny a modification of the award.

"To attempt to carry on operations under the terms of the Federal Board's award is impracticable, since it would mean constant interference in management and early bankruptcy for the companies. When it turned out that the government was unwilling to recognize the justice of the companies' stand on these matters, there appeared to be no purpose in my staying longer in Mexico. The door is not finally closed, but I left without any understanding as to the advisability of reopening the negotiations. Under the circumstances, I do not look for any further action until the Supreme Court hands down its decision."

Lombardo Toledano, leader of the Mexican Confederation of Labor and known as the "John L. Lewis of Mexico," is quoted from vernacular newspapers as saying, "we are only waiting termination of the legal steps to proceed ourselves; we have many courses open to prevent losses by the workers and to the national economy."

Meanwhile, the bond of 3,000,000 pesos posted by the oil companies in compliance with the ruling from the Labor Board while the case is in the Supreme Court is standing. In the event of an adverse decision, the bond probably will be forfeited and presumably applied to payment of strike wages to the workers who were out for nearly two weeks in the middle of 1937. The fund would also pay in part the award of higher wage scales originally ordered by the Labor Board under date of December 18, 1937.

25,000,000-Acre Lease in Papua May Be Given Test This Year

Netherlands New Guinea Petroleum Co., in which Standard-Vacuum and Royal Dutch-Shell participate to the extent of 40 per cent each and in which Standard Oil Co. of California owns 20 per cent, probably will start at least one and possibly two exploratory wells during 1938.

The extensive aerial survey, one of the largest photography projects in the history of this exploratory medium, is now about 90 per cent complete. From the aerial photography results, geologists have selected the most favorable appearing areas for more detailed study and probably will determine their test well locations from coordinated results of photographs, core drilling and seismograph readings.

New Guinea, or Papua, as the island is known by several, is an extension of the Dutch East Indies chain and may bear important relationship to portions of the group nearer mainland which have already produced millions of barrels of petroleum.

The Netherlands New Guinea Petroleum Co. holds exclusive right to explore for oil and gas in territories aggregating about 25,000,000 acres. The exploratory rights were granted to the company by an act of the Netherlands Parliament December 14, 1934, and the act became effective January 1, 1936. Since that time, the company has been engaged in mapping the five blocks involved using aerial photography extensively because of the dense jungle vegetation covering much of the property. Oil seepages are not uncommon in the five blocks selected for exploration along the coastal belt swamps and lowlands.

Gulf Exploration Licenses Granted in England

Capt. Harry Crookshank, M.P., secretary for mines, announces that five additional prospecting licenses, covering a total area of approximately 669 square miles, in Yorkshire and Lancashire, have been issued by the British board of trade to Gulf Exploration Co. (Great Britain), Ltd.

The fourth failure has been registered in the 1937-38 exploration program in Great Britain with abandonment of D'Arcy Exploration Co.'s test at Kingsclere, near Newbury, in southern England, which was carried to 5,125 feet without showings of oil or gas.

D'Arcy is moving equipment from the Kingsclere location to Gun Hill, 3 miles from Leek, Staffordshire, where the next project will be launched. There are five active drilling operations remaining on the list which will be increased to six when the Gun Hill test is spudded in the near future.

D'Arcy's current activity includes four tests, one of which is an old well at Hardstoft, Derbyshire, which will be reconditioned and deepened. At Eskdale, near Whitby, D'Arcy's test is drilling below 2,535 feet; at Cousland, near Dalkeith, progress is reported at 1,450 feet and at Hankham, near Pevensey, a new hole was spudded two weeks ago.

Anglo-American Oil Co. No. 1 Midlothian, at Cousland, is drilling at 2,247 feet in the oil shale group. Steel Brothers & Co.'s mystery operation is proceeding at an undisclosed depth in Upper Booth. Reports are current that D'Arcy Exploration Co. is launching a survey of an area 500 square miles in North Lincolnshire, 20 or 30 miles inland from the east coast.

Vacuum Oil Co.'s 2,750-bbl. refinery at Almasfuzito, Hungary

ENGINEERING and OPERATING

In This Issue

DISTINCTIVE FEATURES INCLUDED IN BRADFORD REMODELED PLANT
By J. P. O'Donnell ..... *Page 48*

Bradford Oil & Refining Company has recently completed a modernization program at its Bradford, Pa., refinery in which were included several outstanding features. A new vapor-phase cracking and reforming unit is yielding about 80 per cent of 72-octane motor fuel when operated on a naphtha charge. A new dewaxing unit was also installed, cost of construction of this plant being greatly lowered by employment of much equipment already installed in the refinery.

PRODUCTION CHARACTERISTICS OF CALIFORNIA FLOWING WELLS
By E. G. Trostel ..... *Page 50*

Oil operators in recent years have come to realize the importance of conserving reservoir energy, and have adopted production practices consistent with this policy. Here the author reviews factors contributing to the behavior of oil reservoirs, and describes production methods and their relation toward conservation of reservoir energy. Particular attention is paid to natural gas as a propulsive force in movement of oil through a reservoir and for lifting oil to the surface.

AUTOMATIC SAMPLING OF DRILLING MUD ACHIEVED BY NEW DEVICE
By L. G. E. Bignell ..... *Page 57*

To eliminate the "personal equation" in the catching of drill-cuttings a new mechanical sampler has been designed that gives much promise of fulfilling many of the requirements of automatic sampling. A description of the machine is given and also a new test for detecting slight showings of oil or gas quickly and accurately.

COMBINED SCRUBBER, OIL-GAS SEPARATOR HAS MANY ADVANTAGES
By T. P. Sanders ..... *Page 60*

In the Wilmington field of California one company has devised an oil scrubber combined with an automatic gas, water and sand separator in order to reduce investments in stock tanks and to avoid tank cleaning and gauging. Operation of the installation is described and economical advantages gained by its use are pointed out.

TREATMENT OF OIL WATER EMULSIONS IN THE EAST TEXAS FIELD
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Operators in the East Texas field have adopted several methods of treating oil emulsions, these methods being classified generally as mechanical, electrical, heat and chemical dehydration. Methods of applying these processes are described as well as practices contributing to more efficient operation and lower treating costs.

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Several Distinctive Fe

in Bradford Oil Re

Chillers used in cooling the solvent-oil mixture before it goes to the filters (top); and a general view of the solvent dewaxing unit (below)

By J. P. O'DONNELL

A modernization program, embracing several out-of-the-ordinary features, was completed recently by the Bradford Oil Refining Co. at its Bradford, Pa., refinery. Included were the installation of a vapor-phase cracking and reforming unit, the first of this type to operate on Pennsylvania charging stock, and a solvent dewaxing unit in which the initial cost was substantially reduced by employing as much existing equipment as possible.

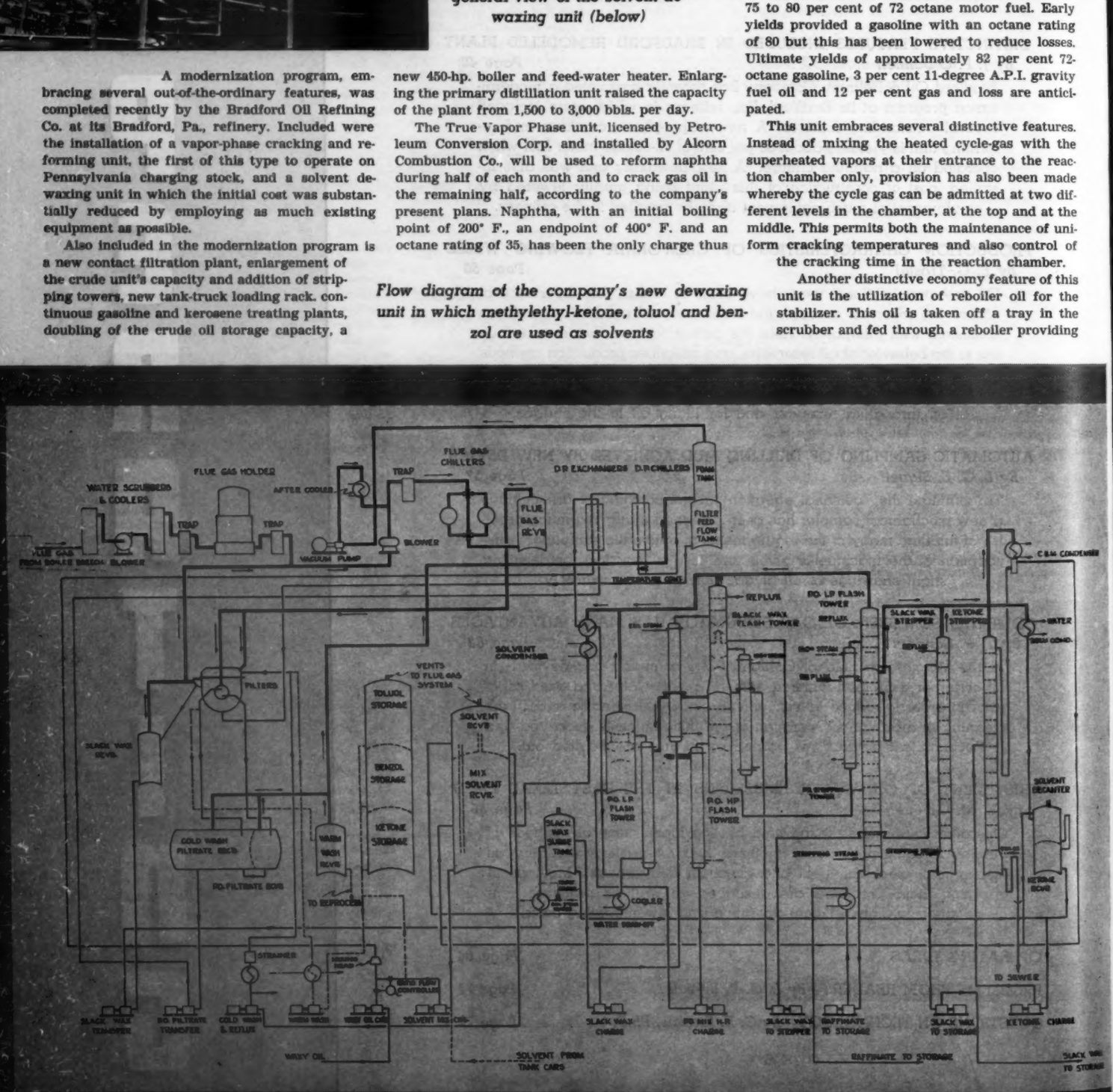
Also included in the modernization program is a new contact filtration plant, enlargement of the crude unit's capacity and addition of stripping towers, new tank-truck loading rack, continuous gasoline and kerosene treating plants, doubling of the crude oil storage capacity, a new 450-hp. boiler and feed-water heater. Enlarging the primary distillation unit raised the capacity of the plant from 1,500 to 3,000 bbls. per day.

The True Vapor Phase unit, licensed by Petroleum Conversion Corp. and installed by Alcorn Combustion Co., will be used to reform naphtha during half of each month and to crack gas oil in the remaining half, according to the company's present plans. Naphtha, with an initial boiling point of 200° F., an endpoint of 400° F. and an octane rating of 35, has been the only charge thus far. The yield since the installation was first put on stream several weeks ago has increased from 75 to 80 per cent of 72 octane motor fuel. Early yields provided a gasoline with an octane rating of 80 but this has been lowered to reduce losses. Ultimate yields of approximately 82 per cent 72-octane gasoline, 3 per cent 11-degree A.P.I. gravity fuel oil and 12 per cent gas and loss are anticipated.

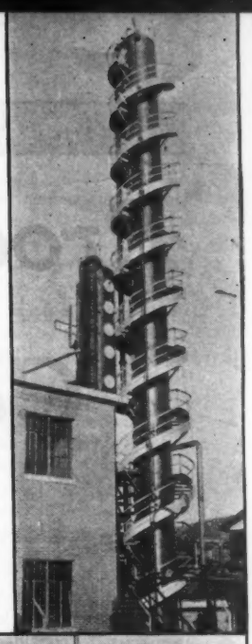
This unit embraces several distinctive features. Instead of mixing the heated cycle-gas with the superheated vapors at their entrance to the reaction chamber only, provision has also been made whereby the cycle gas can be admitted at two different levels in the chamber, at the top and at the middle. This permits both the maintenance of uniform cracking temperatures and also control of the cracking time in the reaction chamber.

Another distinctive economy feature of this unit is the utilization of reboiler oil for the stabilizer. This oil is taken off a tray in the scrubber and fed through a reboiler providing

Flow diagram of the company's new dewaxing unit in which methylethyl-ketone, toluol and benzol are used as solvents



Features Are Included in Remodeled Plant



Stripping column added during the enlargement of the plant's crude distillation capacity

heat for the stabilizer. The cooled oil is then returned to the scrubber, thus economically reducing the heat load on the system.

The remainder of the unit is conventional in design and operation. The charge passes through heat exchangers countercurrent with scrubber tops to the vaporizer still and thence to the flash drum where a temperature of 725° F. is maintained. A portion of the compressor gas from the flash-gas coil is admitted to the flash drum to act as a vaporizing medium and insures the entire charge entering the superheater in the vapor phase. The stabilizer tops are mixed with a portion of the compressor gas after leaving the heavy gasoline accumulator and pass through the cycle-gas coil. From the cycle-gas coil they mix with the superheated vapors from the superheater and enter the reaction chamber.

Control of Cracking Time

The oil vapor outlet-temperature from the superheater is approximately 1,100° F. and the cycle-gas outlet-temperature is approximately 1,245° F. From the superheater the vapor and cycle gas are carried to the reaction chamber where the reaction takes place. As noted previously, the cycle gas may be admitted at either of two points to afford better control of the degree and time of cracking.

Gasoline residuum and processed gas enter the scrubber from the reaction chamber where the cracked residuum (from 7 to 10 degrees A.P.I. gravity) is taken from the bottom. Gasoline and gas are taken overhead through economy exchangers to the bubble tower. Recycle stock is taken from the bottom of the bubble tower and the gasoline and processed gas are taken overhead through exchangers and cooling to the gasoline accumulator. Gas from the top of this accumulator provides suction for the compressor and the residue gas from the unit is sent to an absorber in which it is stripped of isobutane and the heavier fractions. The gasoline from the heavy gasoline accumulator is pumped to the light gasoline accumulator and is recombined with the discharge from the compressor, where, under high pressures, all the pentanes and heavier constituents are condensed.

Gasoline from the light gasoline accumulator and the bottoms of the absorber are fed through heat exchangers countercurrent to stabilizer bottoms and enter the stabilizer. The stabilized gasoline from the bottom of the stabilizer is split, a portion going to storage and the remainder to the naphtha tower where a light 20 to 30 per cent fraction is flashed off and recombined as stabilized gasoline. Heavy gasoline from the bottom of the naphtha tower, after supplying heat to the stabilizer feed, is further cooled and used as absorption oil for the make gas absorber.

By employing as much existing equipment as possible the company accomplished a substantial saving in the initial cost of the installation of the dewaxing unit using methylethyl-ketone, toluol and benzol as the solvents. This unit, licensed by the Texas Co., was installed by the Lummus Co. The largest saving was effected by converting the existing ammonia compression refrigeration system to the new service. Two booster compressors were converted into single-stage compressors and are used in conjunction with the two-stage ammonia compressor from the original unit. This obviated the erection of an entirely new refrigeration unit.

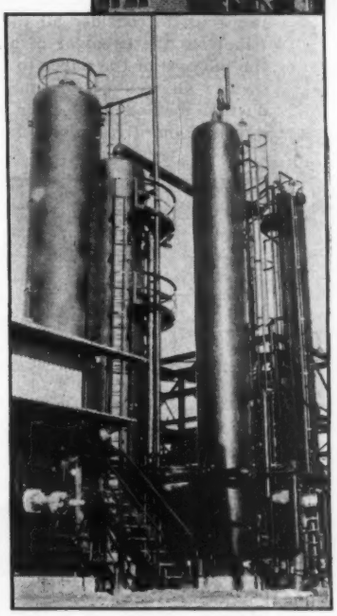
Novel Type Chillers Used

This dewaxing unit is the first of this type in which the double pipe chillers are set at a slight angle. This angle, one-half inch to the foot, provides better venting of ammonia gas and makes for improved control of the air-actuated ammonia liquid levels. No foaming of the ammonia has been noted to date.

Other economies, substantial in the aggregate, were effected by housing the unit in an old building enlarged for this purpose and in using scrapped steel for runways, stairways, supports, etc. This is, incidentally, the first unit of this type in which the recovery system has been housed. Another innovation is a comparatively simple arrangement whereby stack gas from the boiler is utilized for prevention of vapor losses. This gas is compressed by a centrifugal blower to a pressure of 22 inches of water and blown to the system. All vessels and tanking in the entire unit are vented to gas holders, providing a closed gas system that obviates all but negligible solvent losses.

Flow of the charge through the dewaxing unit, similar to that of other units of this type is shown in the accompanying flow chart. The charge, at present at 170-viscosity wax distillate, is mixed with one part charge to two to four parts solvent, dependent on the former. This mixture is pumped through exchangers where it is cooled by the cold filtrate, through the sloped double pipe ammonia direct-expansion chillers to the overhead filter feed tank.

From the feed tank the mixture flows by gravity to Goslin-Birmingham vacuum drum-type filters of the latest improved design. There the filter wax formed on the outside of the drum is removed by a screw conveyor and carried to the sump tank. The filtrate flows through internal piping to the filtrate receiver. This receiver is held under suitable vacuum up to 25 inches of mercury by a reciprocating vacuum pump which takes suction on the receiver from the flow trap to prevent danger of liquid in the suction lines.



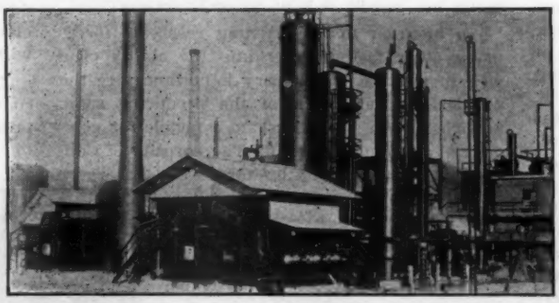
Reaction chamber, scrubbing and fractionating towers in the new cracking and reforming unit

Cold wash solvent, of approximately the temperature of the mix, is applied to the wax cake to displace all oil, and results in a substantially oil-free slack wax. Both the slack-wax mix and the filtrate from the filters are pumped to recovery systems, essentially the same in design, and through separators to discharge from the unit as finished slack wax and finished oil.

Cold slack wax from the sump tank is carried to a surge tank where a solvent-water mix is taken off and piped to a fractionator for recovery of the solvent. The slack-wax mix moves through vapor heat exchangers and steam heaters to a flash-type evaporator. The slack wax contains a small percentage of solvent which is removed by steam stripping and returned to storage.

The filtrate recovery system is similar except that the filtrate is pumped through vapor heat exchangers to a low-pressure flash tower, through steam heaters to a high-pressure flash tower and to a second low-pressure tower from which it is taken by gravity to the steam stripper.

The overhead condensate from the steam stripper has a small percentage of methylethyl-ketone, benzol, and water and is taken to wet solvent decantor drum. The benzol layer is decanted from the top and the water layer, containing a small amount of solvent, from the bottom to a solvent fractionator where the solvent is separated to be taken overhead to storage and the stripped water is discharged into the sewer.



Bradford Oil Refining Co.'s new cracking and reforming unit recently installed as part of a plant modernization program in its Bradford, Pa., refinery

Production Characteristics of California Flowing Wells

By E. G. TROSTEL
Union Oil Co. of California

To properly evaluate the function of natural gas in the production of oil, it is necessary to consider all the factors which contribute to the behavior of an oil reservoir. It is the purpose of the paper to review these factors, discuss oil well performance, and describe production methods and their relation toward the conservation of reservoir energy. Throughout the discussion, particular attention will be paid to the importance of natural gas as a propulsive force in the movement of oil through the reservoir and as a lifting force in raising the oil from the reservoir to the surface of the ground.

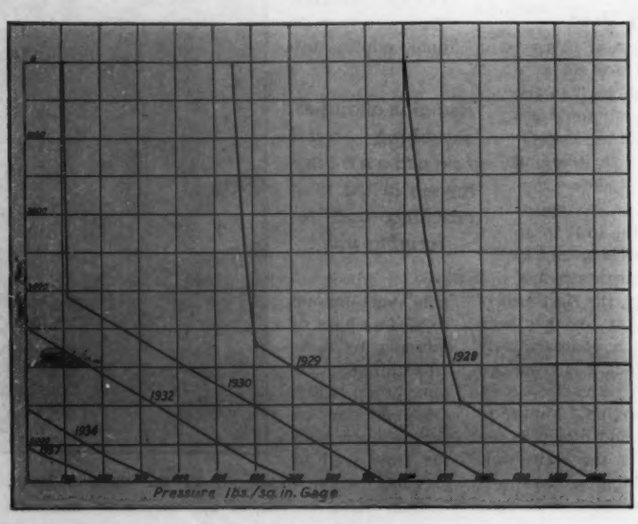


Fig. 1—Static depth-pressure traverses

Oil reservoirs may be roughly classified according to their geologic structure into open and closed types. In the open type of reservoir the oil is in direct contact with water in the lower parts of the structure, and is often said to be under hydraulic control. The majority of the California major fields, such as Santa Fe Springs, Signal Hill, Kettleman Hills, and Dominguez, are of the open type. Closed type reservoirs, as the name indicates, are structurally sealed and are often said to be in volumetric control. The Playa Del Rey field is thought to be of the closed type.

Lithologically, reservoirs may be classified as to the pore, fissure, or cavernous type. California fields, producing largely from sandstones and unconsolidated sands are of the pore type. Formations made up of limestone as found in the Mid-Continent area are largely of the fissured or cavernous type.

Reservoirs likewise may be classified as to the nature of the propulsive forces which exist. Reservoirs of the open type are usually controlled by the hydrostatic head of the edgewater and are said to have a water drive. In fields of very high permeability and restricted production the edgewater may follow the withdrawal of the oil so closely that there is very little decline in reservoir pressure as production takes place. However, in most California fields of the open type reservoir, the permeability is sufficiently low and rate of production sufficiently high that there is a large pressure differential in the reservoir surrounding producing wells. As a result, it is the expansion of the gas in the reservoir which directly provides the chief propulsive force. In addition, the edgewater encroaches to reduce the areal extent of the oil as depletion takes place, and tends to maintain reservoir pressure.

Reservoirs of the closed type are almost entirely dependent upon the expansive action of the gas present to force the oil to the well bore. Capillarity is thought to provide a force for moving the oil through the reservoir, due to the relative adhesion tensions of oil and water. Evaluation of capillary forces is difficult, but in most fields they are thought to be relatively small in comparison with gas expansion and water drive. Due to differences in elevation in an oil structure, gravity likewise acts as a propulsive force for some wells, but usually it is of minor importance.

In addition to the existing reservoir forces many other factors enter into the ability of a well to produce. Of primary importance are the physical characteristics of the producing sand. Sufficient pore space must be available for commercial accumulation of oil. The porosity of California oil sands varies between wide limits of from 10 per cent to slightly over 40 per cent. Closely connected with porosity in most cases, but not necessarily so, is permeability, an index measuring the ease with which fluids may flow through the sand. Permeability of California producing oil sands varies from slightly over 10 to 1,500 or more millidarcys, with the majority of the sands averaging less than 500 millidarcys. The per cent of oil saturation of the pore space is another important factor, having values ranging from 10 to over 50 per cent. It is of interest to note, that practically all productive sands possess up to 50 per cent or more saturation by connate water, held in place by capillary forces and not produced with the oil to any great extent, if at all.

The nature of the crude oil itself has long been regarded as fundamental among the factors affecting production rate and ultimate economic recovery. The ability of an oil reservoir to produce is inversely proportional to the viscosity of the oil. Surface tension, or rather adhesion tension, affects the amount of oil retained in the reservoir in proportion to its value. Similarly, the ease with which oil flows through the sand varies as some inverse function of its surface tension. The specific gravity of the oil is a factor in that heavy oils tend to be more viscous and to have a higher surface tension.

Before going farther, it is well to consider the effect of gas on the properties of crude oil. Gas in a reservoir will exist in three states; as dissolved gas, as free gas, and as liquefied or condensed gas due to reservoir pressure. The gas in solution and in the liquid state reduces the specific gravity, viscosity, and the surface tension of the resulting crude oil according to the amount of gas present. It is at once evident from these considerations that oil should be produced from a reservoir in such a manner as to keep a maximum amount of gas in solution with the oil. Such procedure will result in lowered production costs and greater ultimate commercial recovery of oil from the reservoir under present methods. In fact, it is a fundamental principle of good production practice to produce the least possible amount of gas with the oil; that is, to produce with the lowest possible gas-oil ratio.

C.N.G.A. — Presented before monthly meeting at Los Angeles, California, February 3

The oil and gas in a reservoir under original conditions are under considerable pressure. This pressure, which increases with depth, may be due to temperature conditions, folding, and the weight of the overlying strata but is particularly due to the hydrostatic head of the edgewater in California. The original pressure in most California fields has been found roughly equal to the pressure exerted by a column of water equal to the depth of the reservoir, a fact which would be inferred by the open type of reservoirs. Regardless of the type of expulsive force controlling the reservoir, the formation pressure must be considered a basic factor, since the flow of oil and gas can be occasioned only by a pressure differential existing between the formation and the well bore.

E. G. TROSTEL

When a well is placed on production, every effort is made to ultimately produce as much oil as possible for the least cost. Although it is possible to increase permeability in limestone formations by shooting and acid treatment, in Cali-

fornia fields, all factors affecting productivity are fixed with the exception of the formation pressure. Excepting recompleting and reconditioning of wells, all control of the many factors affecting the productivity of oil reservoirs and the ultimate economic recovery therefrom is versed in the regulation of the pressure differentials existing between the reservoir and the well bores of the producing wells. In order to understand and control the production of individual wells and the reservoir as a whole, practically all major operators in California measure subsurface pressures. Analysis of the results of such tests provides the production men with dependable data which aid in selecting the most advantageous methods of production.

Oil Well Performance

In view of the importance of pressure control in production, it might not be amiss to outline the procedure for measuring subsurface pressures and briefly describe the methods used in denoting well performance.

A subsurface pressure gauge is lowered into the well and pressures are recorded at various depths. Plotting pressure-depth relations gives rise to curves as illustrated in Figures 1 and 2, after Kantzer and Trostel[1]. Under static conditions the gauge will record the existing reservoir pressure in the vicinity of the well. The fluid level can be located, the oil-water interface, the density of the fluid, and the effective depth of the hole, in so far as these factors exist. By comparing such data over the reservoir as a whole, and by studying their behavior with time, the trends of gas cap expansion, edgewater encroachment, fluid density, etc., can be determined. When undesirable conditions appear or seem to be imminent, changes in production methods can be made to correct them when their control is possible. The application of depth-pressure curves in producing wells is found in determining the flowing gradients under various conditions. Such data is valuable in studying energy losses in flow strings and in calculating mean formation pressures.

To completely understand the performance characteristics of an oil well, it is desirable to plot the subsurface pressure opposite the producing formation as a function of the rate of production. If these curves were strictly linear their use would prove more widespread. However, in perhaps a majority of California flowing wells, the deviation from linearity is not great until a high rate of production is reached which causes the curves to dip toward the axis, possibly as a result of a turbulent flow in the formation. By establishing such a pressure-rate curve it is possible to determine with considerable accuracy the pressures which will exist at other rates of flow. Such data constitute a valuable aid to the production foreman or production engineer who regulates the production of the field.

When the pressure-rate curve of a well is substantially linear, it is convenient to speak of the reciprocal value of the slope of the pressure-rate curve. This value, called the productivity index, is equivalent to the gross barrels of oil produced per day per pound per square inch pressure differential. For example: If an oil well produces 500 bbls. per day with a subsurface pressure opposite the producing formation of 600 pounds per square inch and 300 bbls. per day with a subsurface pressure at the same datum of 700 pounds per square inch, then the well will have a productivity index of (500-300) ÷ (700-600) or 2 bbls. per day per pound per square inch. Productivity indices in California oil fields vary over wide limits, indices being measured of less than 0.1 to as much as 120 bbls. per day per pound per square inch. Productivity indices are useful in evaluating well potentials, and in making comparisons of various wells as to their relative abilities to produce.

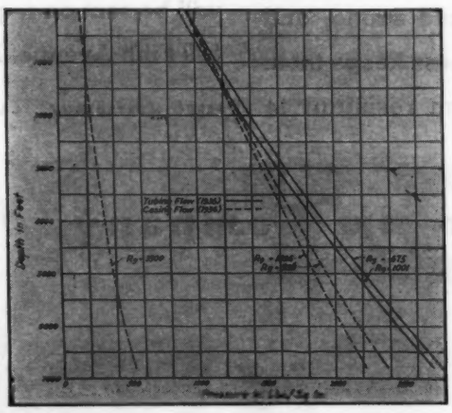


Fig. 2—Flowing depth-pressure traverses

By extrapolating a pressure-rate curve to zero pressure, or by multiplying a productivity index by the static pressure, a rate of production results which would exist if all the oil were removed from the well bore as fast as it came in under zero back pressure. While such a figure denoting absolute potential can be closely approached only in pumping wells, it may well serve as a theoretical potential for flowing wells and furnish a sound basis for proration. The use of such potentials would obviate the need for open-flow of wells with the consequent danger of damaging the reservoir.

Returning again to consideration of the function of natural gas in the production of oil, it has been seen that in the majority of California oil fields, gas is a chief expulsive force. In addition, it has been noted that the amount of gas in solution with oil increases the fluidity of the oil and the ultimate economic recovery of oil from the reservoir. To attain these desirable objectives, the men in charge of production endeavor to maintain the reservoir pressure at as high a value as is possible under the existing demand for oil, and to produce the oil with a minimum gas-oil ratio. As these two factors are not entirely independent, it becomes necessary at times to strike a favorable balance between the two.

Control of Gas-Oil Ratio

Before considering in detail the methods employed to maintain gas-oil ratio at a minimum, it should be of interest to see if the above theoretical conclusions are borne out by experience. Figure 3 is taken from a paper by Marsh and Robinson[2], and it clearly indicates the benefits to be derived from back-pressure control and maintenance of low gas-oil ratios. It is believed that the importance of production under minimum gas-oil ratio has been sufficiently emphasized, and so attention will now be focused upon methods used in its control.

Tubing Depth

As previously discussed, a well produces solely due to the creation of a pressure differential between the formation and the well bore. At a given time and under the same conditions there is a one-to-one relation between the oil and gas coming into a well bore and the value of the pressure differential. Since a given quantity of gas accompanies the oil entering the well bore at a given steady production rate, it should not be possible to vary the gas-oil ratio by mechanical flow string devices as subsurface chokes and tapered tubing strings. However, the depth of the tubing may influence the gas-oil ratio in that it changes the nature of the pressure gradient held against a producing sand of appreciable thickness. Tubing a well low in the producing oil sand as compared to tubing high tends to lessen the pressure differential between the top of the formation and the well bore and to increase the differential at the bottom of the formation. As free gas tends to accumulate at the top of an oil zone, tubing low should decrease gas-oil ratios. Considerable data has been published to illustrate this fact, and although such

[1]Oil Well Performance, by B. P. Kantzer and E. G. Trostel, A.P.I. Drilling and Production Practice, 1937.

[2]Advantages of Flowing Wells Through Tubing, by N. H. Marsh and B. H. Robinson, A.I.M.E. Production Development and Technology, 1932.

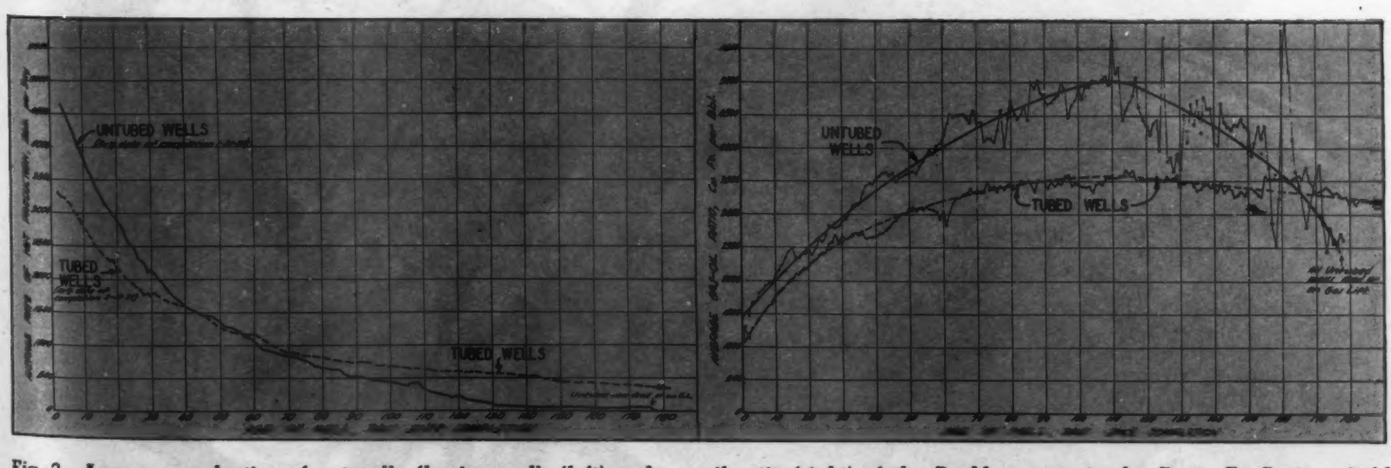


Fig. 3—Average production of naturally flowing wells (left) and gas-oil ratio (right) of the Buckbee zone in the Santa Fe Springs field

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FERRO-MOLYBDENUM, CALCIUM MOLYBDATE AND MOLYBDENUM TRIOXIDE

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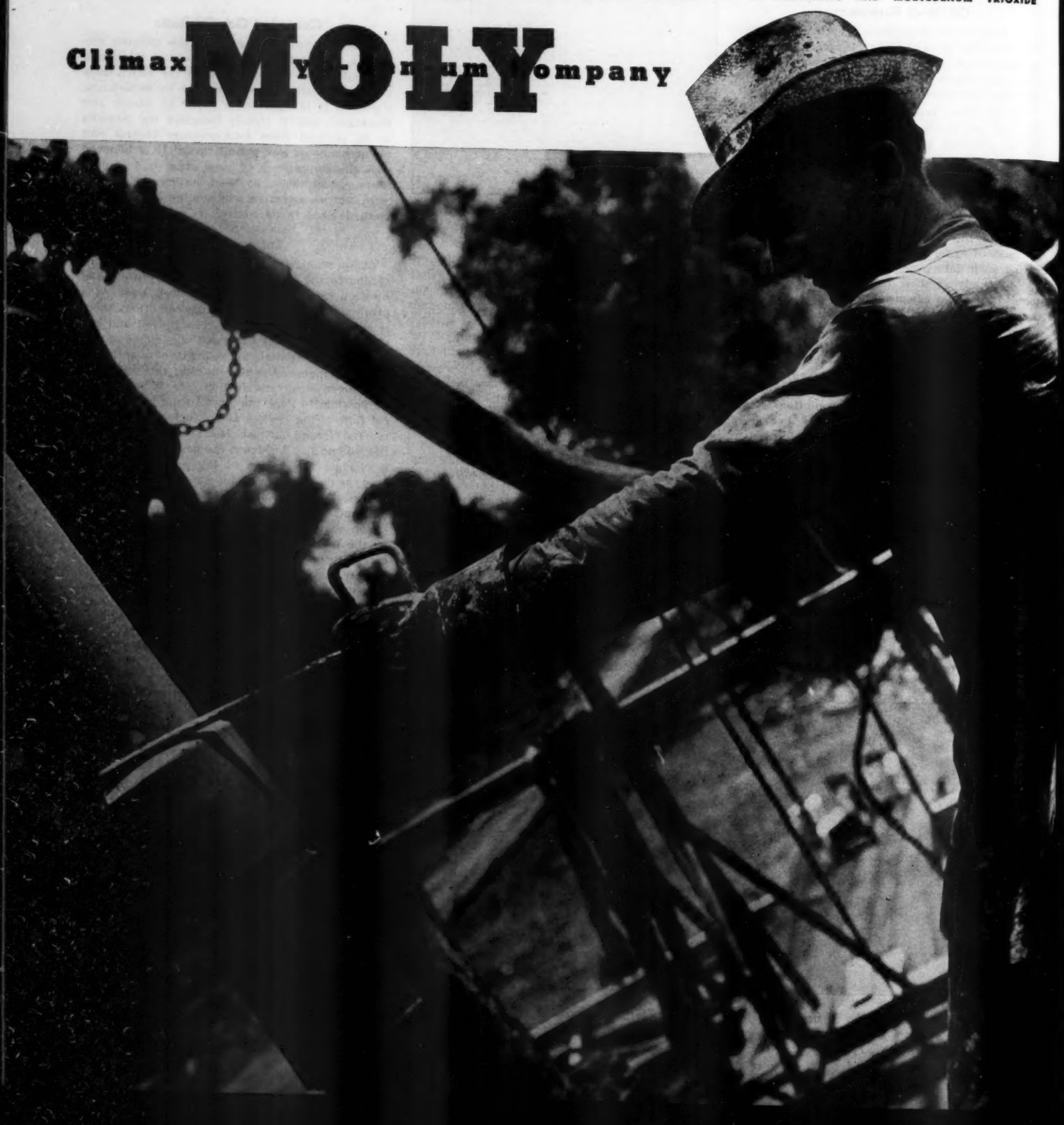


procedure may not be universally successful, it is a method which definitely warrants attention.

Optimum Production Rate

That gas-oil ratio varies with production rate is a fact which has been observed in practically all California fields. At low production rates and high subsurface operating pressures, gas velocities may be sufficiently low in the formation to result in high slippage losses with consequent high gas-oil ratios. As production rate increases and production pressures are lowered, gas velocities may increase to a point at which friction losses may be the controlling factor accompanied by an excessive loss of gas from solution in the oil. Somewhere between these two extremes a favorable balance should exist, with the gas-oil ratio at a minimum value. Figure 4, after Sullivan[3], illustrates such behavior for wells in the Keokuk pool in Oklahoma.

As a matter of production policy, control of gas-oil ratio usually can be effected by determining the rate of production for minimum gas-oil ratio. It is to be observed that the optimum rate is a transient value, and that the trend of the optimum rate is upward with time. Careful observance of gas-oil ratio versus production rate characteristics should result in the determination of favorable production rates for any California oil field.

Intermittent Flow

The procedure of intermittent flow or stop-cocking has been suggested as a method for lowering gas-oil ratio. Its success should depend upon a redistribution of gas in the reservoir resulting in a more uniform saturation of the oil. Field data concerning the effect of stop-cocking on gas-oil ratio are meager and often conflicting; however, the method may be worthy of trial where production requirements permit its use.

Surging or Heading Wells

When a well is in the final stages of its flowing life, the nature of flow is usually characterized by a surging or heading action. If the unsteady flow results from a surging reservoir condition, it may be possible to correct this situation and stabilize the producing subsurface pressure opposite the sand face by mechanical flow means such as tubing packers, subsurface chokes, tapered flow strings, or by resorting to gas-lift. Such methods can be expected to improve gas-oil ratios only when they affect the pressure differential held against the formation, and not when the oil and gas enter the well bore at a steady rate and with more than enough energy to raise the oil to the surface readily. Here again experimental field data are not consistent, as might be expected, and the limits of application of these methods should be fully understood before their trial as a means of lowering gas-oil ratio.

Gas Exclusion

Many California fields are characterized by the existence of free gas or a gas cap at the top of the producing structure. Wells which are open to the gas zone invariably produce with excessively high gas-oil ratios. These ratios can be materially reduced in most cases by completion or recompletion of wells with blank pipe opposite the free gas, preferably cemented. In line with the above method is that of using a formation packer to exclude free gas from the well. A similar but more complicated method of partial or complete free gas exclusion is being successfully used at Kettleman Hills. A cement "scab" is laid outside the pipe between the free gas and oil "zones." Tubing is packed off opposite the scab job and provided with a flow collar a short distance above the packer. Gas may be admitted above the cement scab through perforations into the casing and then through the adjustable flow collar into the tubing to provide lifting energy for the oil which enters through perforations below the cement scab. This method of control of gas-oil ratio is very effective, since it provides a direct means of regulating the rate of gas entry into the well.

[3]Gas-Oil Ratio Control in Flowing Wells, by R. J. Sullivan, A.P.I. Drilling and Production Practice, 1937.

Repressuring and Gas Injection

When the energy of a reservoir has been expended to the extent that production is not profitable, gas injection to repressure the reservoir may be employed provided that the field has not been flooded by edgewater encroachment. Such procedure, a form of secondary recovery, has met with considerable success in materially increasing the ultimate economic recovery of a field. Another method of utilization of extraneous gas is found in gas injection as primary recovery takes place to aid in maintaining reservoir pressure. The flowing life of wells in the field of gas injection is lengthened, and the ultimate economic recovery of the reservoir increased.

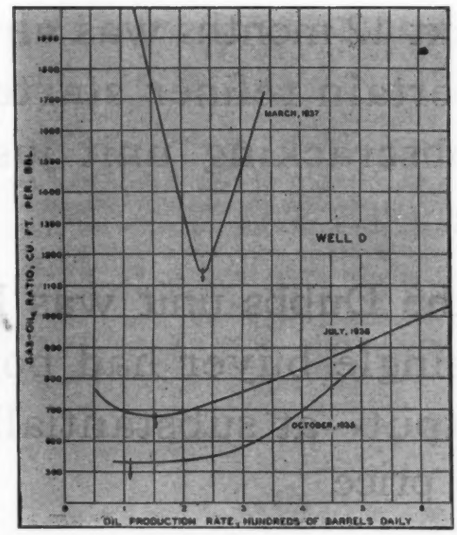


Fig. 4—Gas-oil ratio characteristics of wells in Keokuk field of Oklahoma

Utilization of Gas in Flow String

The flow of oil and gas up a vertical flow string presents a difficult problem for study. Work must be done to raise the oil and gas to the surface and to overcome the retarding forces of friction and slippage. In the majority of flowing wells this energy is provided by the expansion of the gas associated with the oil.

In the early stages of the flowing lives of most California oil wells, more than sufficient energy is present to flow the well. Under these conditions flow losses are relatively unimportant unless use can be made of the energy which the oil and gas possess when they arrive at the surface of the well. When a well reaches the latter stages of its flowing life or goes on gas-lift, the efficient use of the gas becomes more important, either to prolong its flowing life or to reduce the input gas to a minimum. To utilize the lifting force of the gas to the utmost extent, subsurface chokes and carefully designed tubing strings have been used.

Subsurface chokes are designed to permit the complete expansion of the gas in the tubing. Although they may be quite effective, their use is often overbalanced by the difficulties of their installation and adjustment.

The efficiency of flow through tubing is related to its size. Too small tubing will result in excessive friction, while too large tubing will result in excessive slippage losses. For a given production rate, gas-oil ratio, pressure, temperature, and specific gas and oil, there will be an optimum size of tubing. However, this ideal size will vary over the length of the tubing. The evaluation of the proper taper for a tubing string is exceedingly complex, and can only be approximated at best. In addition, the best tubing string design will change as the production rate declines. As a result of all the difficulties involved, tubing design generally ends in the selection of a uniform string of standard size.

Conclusion

In reviewing the characteristics of oil and gas reservoirs, it has been seen that natural gas provides a chief expulsive force in driving the oil out of sand to well bore and finally to the surface of the ground. Good production practice hinges about keeping a maximum amount of this gas in the reservoir as withdrawal takes place, thus keeping production costs at a minimum and economic recovery at a maximum. The most important means of maintaining a low gas-oil ratio are found in positive exclusion of free gas, producing at an optimum rate, and tubing wells deep. Recovery from an oil reservoir is usually increased materially by gas injection and repressuring by gas. To effect proper utilization of gas energy in lifting the oil to the surface, the flow string should be selected to minimize friction and slippage losses. These requirements usually can be met by a uniform tubing string of standard size.

Project Advisory Committees Named for A.P.I. Group

George A. Hill, Jr., vice president for production of the American Petroleum Institute, has announced the appointment of members for the 1938 project advisory committees of the Institute's Division of Production. They are:

Research Project No. 4—K. C. Heald (chairman), Gulf Oil Corp., Pittsburgh, Pa.; F. R. Clark, Ohio Oil Co., Tulsa; W. B. Heroy, Consolidated Oil Corp., New York; A. W. McCoy, Ponca City, Okla.; R. D. Reed, Texas Co. of California, Los Angeles, Calif., and F. H. Lahee, Sun Oil Co., Dallas, Tex.

Research Project No. 27—E. G. Gaylord (chairman), Standard Oil Co. of California, San Francisco, Calif.; K. C. Heald, Gulf Oil Corp., Pittsburgh, Pa.; C. V. Millikan, Amerada Petroleum Corp., Tulsa; T. V. Moore, Humble Oil & Refining Co., Houston, Tex.; K. B. Nowels, Forest Development Corp., Abilene, Tex.; R. B. Roark, Shell Petroleum Corp., Tulsa; A. C. Rubel, Union Oil Co. of California, Los Angeles, Calif.; W. C. Shutts, Standard Oil Development Co., New York, and F. E. Wood, Standard Oil Co. (Indiana), Chicago, Ill.

Research Project No. 37—E. G. Gaylord (chairman), Standard Oil Co. of California, San Francisco, Calif.; C. V. Millikan, Amerada Petroleum Corp., Tulsa; T. V. Moore, Humble Oil & Refining Co., Houston, Tex.; K. B. Nowels, Forest Development Corp., Abilene, Tex.; A. C. Rubel, Union Oil Co. of California, Los Angeles, Calif.; W. C. Shutts, Standard Oil Development Co., New York, and F. E. Wood, Standard Oil Co. (Indiana), Chicago, Ill.

Continental to Build New Houses at Lance Creek

Adding to its already extensive housing facilities for production and refinery workers, Continental Oil Co. will start work immediately on 11 new single family dwellings for employes in the Lance Creek, Wyoming, oil field, it has announced. The new camp will consist of modern four-room cottages, and will include garage facilities for 12 cars. The houses will be of frame construction built on concrete foundations, with edge-grain floors laid on subfloors and 15-pound saturated felt. All plumbing will be modern, with thermostatically-controlled hot-water heaters.

Pre-sold at a premium

Every gallon of gasoline he can make for the next 12 months was already sold when a certain refiner started up his new Dubbscracking unit just before Christmas

Before the Dubbs unit was half completed a single buyer had bought the entire output—at substantially above the ruling price

He could have bought plenty of gasoline for less—stocks are mounting But he waited for this super product—Dubbscracked gasoline

He is paying the price for it—and getting a good bargain

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Automatic Sampling of Drilling Mud Achieved by New Device

By L. G. E. BIGNELL

When a well is being drilled with either cable tools or a rotary outfit it is customary to secure "samples" of the formations penetrated by the drill. When cable tools are used the driller dumps a portion of the mud brought up in the bailer into a pail and then washes out the mud and saves the sample of the formation. This sample is dried on a board and is available to the production department and the geologists. Experienced cable-tool drillers know by the feel of the line about the kind of formations being penetrated and note changes. If the driller is familiar with the area being drilled he is able to closely determine when important changes in formation takes place. He

Hayward automatic mud fluid and drill-cuttings sampling machine

can also recognize the rock being cut from the samples and he is guided by this information in his drilling operations.

With rotary outfits the problem of securing representative samples of formation is more complex. It is still common practice to catch a portion of the discharge from the returning mud stream in a pail and wash it with fresh water and collect the cuttings. Not having physical contact with the moving parts of the rotary rig mechanical devices have been invented to record the speed of turntable, weight on bit and rate of drilling. Examining cuttings also helps to regulate drilling speeds. The driller on the rotary rig knows the depth of the hole at all times but it is easy to pass through thin sections of rock containing gas or oil and mud of such "showings" without having any knowledge of having penetrated them.

To aid the driller in securing good samples, especially on "wildcat" wells it is regular practice to send a geologist to the location to catch cuttings and examine them and make reports of progress to the driller, the geological department, and the production department. With a knowledge of formations and some general idea of the stratigraphy of the region this practice is a definite improvement over the older method of leaving the catching of samples up to the driller. However, this method still is influenced by the "personal equation" and is not automatic. One of the fundamental rules of good sampling is to eliminate as much as possible the "personal equation." When left to man to make decisions of this kind there is always the chance for error and it is therefore much better to use some kind of mechanical device by which predetermined conditions can be regulated.

Mechanical Sampling

There has been a desire for better sampling methods and several mechanical devices have been tried out without marked success. John T. Hayward, general superintendent of the Barnsdall Oil Co., Tulsa, has recently applied for patent upon a sampling machine which gives promise of fulfilling many of the requirements of automatic sampling at rotary wells. In addition to the sampling machine Mr. Hayward has perfected tests by means of which slight showings of gas or oil can be detected quickly and with a marked degree of accuracy.

This sampling device, shown in the accompanying photograph, is placed in the mud ditch a short distance from the discharge pipe leading from the well head. The mud returns from the bottom of the hole carry the cuttings and it is delivered into the ditch and spreads out forming a more or less homogeneous mud stream mixed with cuttings. This stream flows through the base of the sampler and turns the wheel to which the sample cutter is attached. This sample cutter, or spoon, dips into the mud stream and scoops up a load of mud and cuttings. This mixture is carried to a position above the sample pan. A portion of the mud is spilled out of the spoon into the pan and the balance is washed out by a stream of water and falls into a nest of laboratory screens. The stream of water also washes the mud from the cuttings.

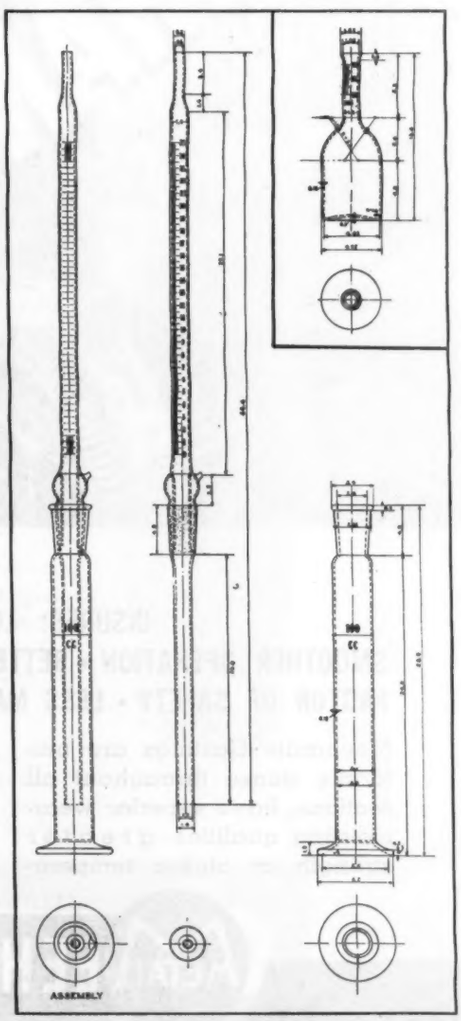
Eliminates Coring

With this device it is possible to secure a sample of the return mud and cuttings automatically. Using duplicate pans and screens it is possible to remove mud and cuttings at any time and test the mud for changes and the cuttings for showings of gas and oil. By this method the necessity for coring is eliminated and it has been found by electric coring check of a hole drilled under these conditions that small showings of gas and oil have been detected with accuracy. When the producing formation is reached it may be cored and the cores sent to the laboratory for the usual tests.

If two samplers are used, one in the mud ditch sampling the returns and the other placed near the suction of the slush pumps it is possible by making the usual mud tests upon each set of samples to determine just what has happened to the mud in passing into and out of the bore hole. Such tests can be made at any desired intervals and the size of the samples can be regulated by selecting spoons of different sizes.

The cuttings caught on the screens can be tested for showings of gas and oil by the following methods:

For oil two methods have been developed. One method required the taking of a 100 cc. sample of the mud and adding 20 cc. of benzol. The mixture is shaken, centrifuged and the benzol decanted into 1-ounce medicine bottles. The benzol samples are set aside in the order taken and the last one secured is compared with these previously



Apparatus for determining gas in mud. Inset, centrifuge tube for measuring oil in mud

taken and color changes noted. When drilling an oil sand there is a darkening of the benzol cuts. It is a very sensitive test and will show small traces of oil. For instance, 2 gallons of 36-degree

or lower gravity oil added to 1,000 bbls. of mud can be easily detected by this method.

To avoid "salting" or contaminating the samples with oil used around the well it is suggested nonstaining tool-joint grease made of light petrolatum and red lead be used. It has also been found that National pipe thread lubricant is nonstaining.

The second method of testing for oil showings is adapted to the detection of light gravity oils or when mud already has been contaminated. A 100 cc. sample is centrifuged in a specially designed glass tube shown in the accompanying sketch. If the mud is thick it should be cut with two or three drops of Stabilite. The oil appears at the top of the tube as a thin rainbow and it is easy to distinguish it from tool-joint grease or wire-line oil.

Both of the above methods can be made quantitive by a little experimentation with oil expected in the locality.

To detect gas a special apparatus shown in the accompanying sketch is used. The upper half is removed and 100 cc. of the mud (do not thin with Stabilite or with other viscosity reducers) obtained from the sampler is poured into the lower half of the testing apparatus using a flannel to keep the ground stopper clean. The flask is then filled with distilled water and the upper half inserted. More distilled water is added through the graduated tube if necessary to bring it up to the zero mark.

A vacuum of, say 600 mm. Hg., is then applied to the top of the tube. A small water jet filter pump costing about $1.00 is convenient for this purpose. The height of the liquid in the graduated

Sampler in position in mud ditch ahead of vibrating screen

tube is read and corrected to atmospheric conditions, thus:

Suppose barometer reads	760 mm.
Vacuum applied is	600 mm.
Difference	160 mm.

Suppose reading in the tube is 10 cc. — 10 per cent.

Then gas in mud equals $10 \times \frac{160}{760}$ = 2.1 per cent approximately.

It has been found that Gulf Coast mud ordinarily contains about .25 per cent gas, probably air. When a gas sand is penetrated the gas content of the mud will increase to 3 or 4 per cent and will rapidly fall back to the ordinary content after the sand has been drilled through.

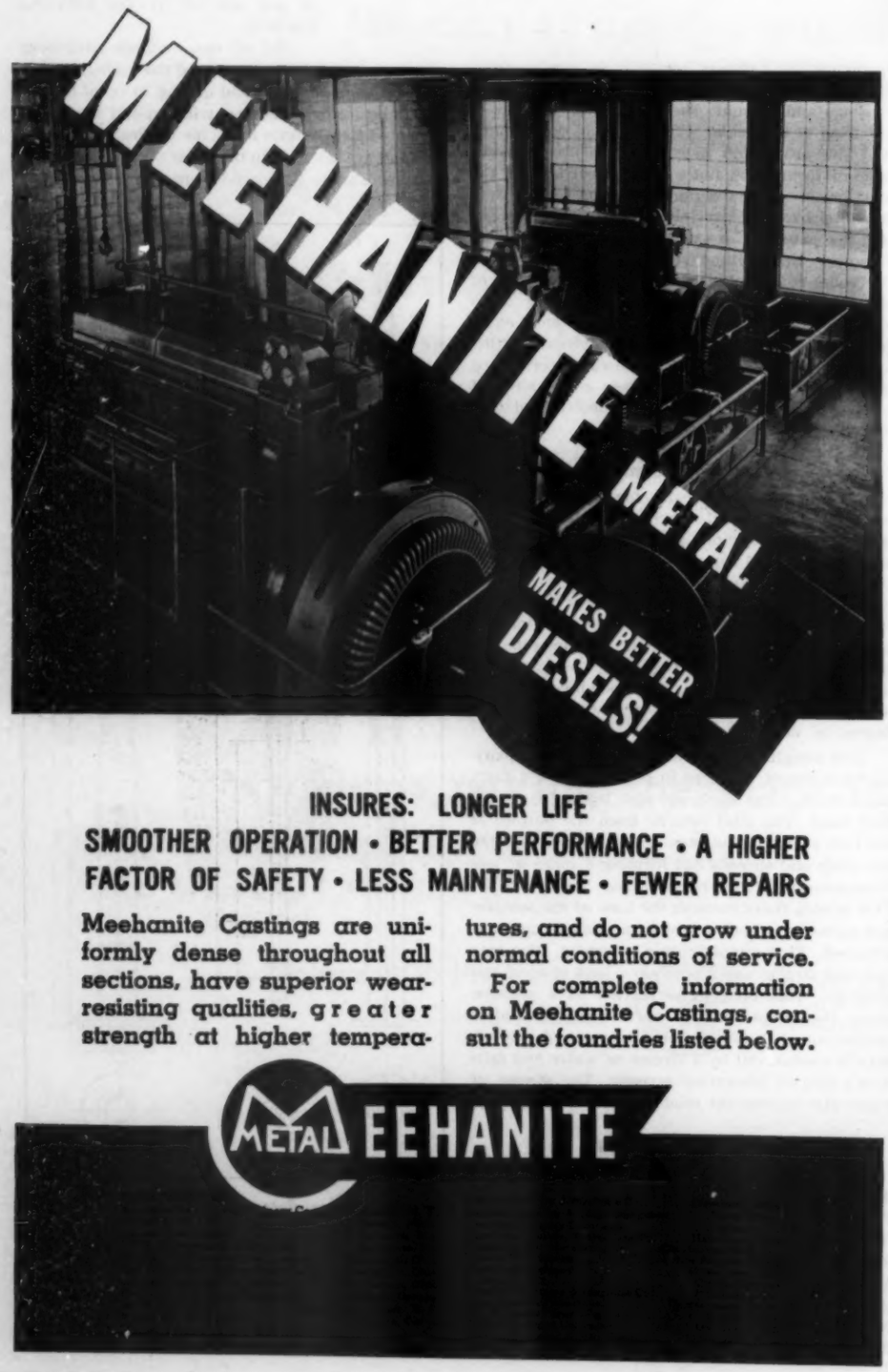
Use of Private Airplanes Likely to be Increased

The private airplane is coming along, Dr. D. P. Barnard, chief engineer of Standard Oil Co. of Indiana, believes. During the last two years, he stated, the number of personal airplanes in use has greatly increased and will come more and more widely used, particularly in the Middle West where long distances are to be covered.

"The place of this type of plane in the general picture of aviation has been emphasized by the displays at the Chicago air show. Never before have aviation and related industries shown the public so many attractions. Through the exhibits it has become possible to appreciate for the first time how wide is the range in air transportation facilities, from the opulence of the airliner or its private equivalent, the true air-yacht, to the light planes designed to combine sports' appeal with economy and dependability.

"The advances in airline equipment are generally well known, but the exhibition has brought out the progress made in developing aircraft for the individual flyer. For example, there are now available several ships which will carry two persons upwards of 30 miles on a gallon of gasoline. These ships provide handling and structural reliability in a degree which virtually guarantees freedom from serious trouble unless the pilot deliberately goes out of his way to look for it. Starting with these small, economical ships, the aerial equivalent of the small pleasure boat, there are planes of increasing long-distance usefulness at higher prices.

"Trips by airplane of course call for greater self-reliance than is required in following highway markers. The pilot of the small airplane is in this respect more like the sportsman who sets out in a canoe or small boat. He is on his own, but the manufacturers are now giving him a high degree of dependability and economy in the ships available for his trips."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MAKES BETTER DIESELS!
INSURES: LONGER LIFE
SMOOTHER OPERATION • BETTER PERFORMANCE • A HIGHER FACTOR OF SAFETY • LESS MAINTENANCE • FEWER REPAIRS
Meehanite Castings are uniformly dense throughout all sections, have superior wear-resisting qualities, greater strength at higher temperatures, and do not grow under normal conditions of service.
For complete information on Meehanite Castings, consult the foundries listed below.
METAL MEEHANITE

Bouquets of Okays

For the New LARKIN Formation Pack Shoe!

Though this new Larkin engineering achievement was introduced but a few months ago, operators have already tossed us a whole bouquet of OKays. They are so enthusiastic about the Larkin Formation Pack Shoe because it fills a real need.

You will readily see the advantages of this shoe by studying the two illustrations shown herewith. That sleeve covering the side ports is kept closed by a spring until the pipe is landed on bottom. This makes it possible to wash down while running pipe, without washing through the side openings. In most side-port shoes, any wash or circulation washes away the walls and causes additional caving.

However, when the pipe is set on bottom, the pump pressure forces the sleeve up, exposing the side-ports, and this allows the cement to come out through the side openings in an upward direction all around the pipe.

The Larkin Formation Pack Shoe is of inestimable value when a rat hole is drilled ahead. The shoe will partially enter the rat hole and pack off on the tapered rubber, thus centering the pipe. This results in an even distribution of cement around the lower portion of the casing, prevents channeling, and assures a perfect cement job at the point where it is most needed, right at the very bottom of the pipe.

Fig. 501

AT ALL SUPPLY STORES

Warehouse stock at Tulsa, Okla., Houston, Kilgore, and Odessa, Tex., Shreveport, La., and Great Bend, Kansas.

LARKIN PACKER COMPANY, INC., ST. LOUIS, U. S. A.

LARKIN PACKER CO.

Combined Scrubber and Separator Has Many Advantages

By T. P. SANDERS

In the last few years average hourly wages have shown a decided increase with the result that most operators have found it necessary to use a greater proportion of their employed man power for development work while routine processes are controlled to a larger degree by automatic equipment. In all branches of the industry automatic devices are gaining in popularity.

Such an installation was recently made on Union Pacific Railroad Co. property in the Wilmington field of California. An oil scrubber is combined with an automatic gas, water, and sand separator in such a manner that it is expected to reduce investments in stock tanks and avoid costs of tank cleaning and gauging.

Wilmington wells produce an average of 3 per cent sand with their oil. It is common field practice to remove as much of this sand as possible by means of oil scrubbers before the oil goes into the stock tanks. The oil scrubbers are tall 200-bbl. tanks, each with a smaller tank on top serving as a gas trap. The oil coming from the wells enters the gas trap. The free gas is removed through an outlet at the top of this chamber and is conducted to the gasoline plant. The oil from the gas trap flows downward through a vertical pipe to the bottom of the scrubber. The scrubber is partly filled with water. When the oil is released at the bottom of the vertical pipe it rises slowly through the water giving up its sand as it goes. At the top of the scrubber the cleaned oil is withdrawn and led to the stock tanks. The sand settles in the cone-shaped bottom of the scrubber where it can be removed by opening a drain valve.

The new installation on the Union Pacific property is essentially a common oil scrubber with automatic features added. A difference exists in the fact that while the ordinary scrubbers are designed to operate at atmospheric pressure, the automatic installation is tested for a pressure of 22 pounds, and operates at any pressure between vacuum and 16 pounds.

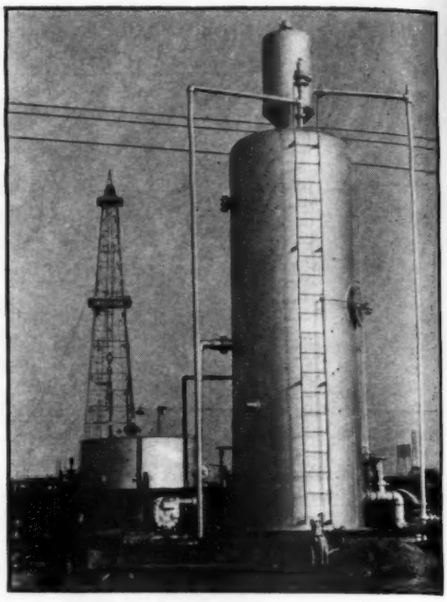
In the operation of the automatic tank, oil and gas enter the gas trap above the scrubber just as in the case of the ordinary scrubber. Also, in the same manner, the gas-free oil is conducted to the bottom of the scrubber where it is released to rise through the water column.

The first difference is seen in the fact that both the oil level and the water level are kept much lower than in the standard form of scrubber. The oil level is controlled automatically by a float with an arm which closes and opens an electric circuit to start or stop a motor-driven pump which removes the oil from the tank. When the oil level in the scrubber reaches a certain height, the float-switch starts the electric pump. The level is lowered several feet before the float-switch stops the pump. Instead of pumping the oil to lease storage tanks as would be expected, the electric pump delivers it directly to the field gathering system. In place of gauging in stock tanks, the oil is metered as it comes from the scrubber and before it reaches the pump. The electric pump is not necessary in locations where the oil will flow from the scrubber into the gathering system by gravity.

Oil metering is being accomplished with a Bassler single-piston positive-displacement liquid meter. For some time after it was installed the oil from the pump was discharged into stock tanks to afford a means of checking the meter against tank gauges. The operators reported that meter readings were within .5 per cent of the tank gauges when large quantities of oil were measured. Since this was considered a satisfactory check, use of stock tanks was discontinued at this location.

At present the automatic production tank is only handling the output of one well, and this is not producing water. However, a water level control device has been designed to keep the water in the tank at the desired level. This device will make use of gas pressure to open and close a diaphram valve on a water outlet from the tank. A meter on this outlet will record the water production before it passes to a pit or some point for disposal.

View of cone-shaped bottom of scrubber showing water jets which are used to wash sand from the tank



Combined oil scrubber and automatic separator at Wilmington, California

To make the automatic operation complete, a sand indicator has been designed. This is not in use at the present time, so as a result it is necessary for the lease pumper to open the drain valve periodically in order to remove the sand from the tank before too much accumulates. An indicator to show the quantity of sand in the tank will make most of these periodic removals unnecessary and save much of the oil which is discharged with the sand. If the sand should become lodged in the bottom of the tank so that it will not drain out, it can be washed free by means of three water jets which are installed in the bottom of the cone.

Since the oil level in the automatic tank is lower than in the regular scrubbers, there is a gas space in the top of the tank. For this reason the top of the gas trap and the top of the scrubber tank have been connected so that gas from both chambers is conducted to the gasoline plant. Gas is metered as well as oil, and the daily volumes produced are kept for permanent record.

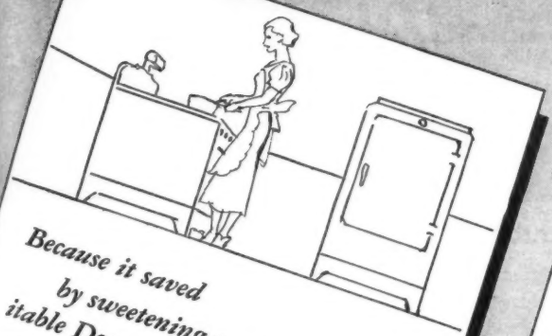
The capacity of the automatic tank is not definitely known. To date the most production which it has been called on to handle has been 500 bbls. per day, but it is believed that 3,000 or 4,000 bbls. could be handled per day without difficulty. The electric pump, which is a rotary type driven by a 15-hp. motor, has a capacity of 260 bbls. per hour, so it is felt that the whole installation is unnecessarily large for the present assignment.

Future installations of type shown here are planned by R. A. Werts, production superintendent for Hall-Baker Co. Mr. Werts assembled the present equipment for use on the Union Pacific properties, which are being developed by the Hall-Baker Co. The process was not considered patentable because it combines ideas and devices which have been in use for many years.

Advantages of the production dispenser, as it may be called, are not always the same but vary under differing field conditions. Where sand conditions are bad it may save frequent tank cleaning; or where the field gathering system will permit, it may save the installation of lease stock tanks. The pump with its automatic control may often save the cost of elevating a separator, and the meter may save much time consumed in tank gauging. At the Wilmington location it has been found that the dispenser requires little attention since there are no tanks to watch.

Purification System

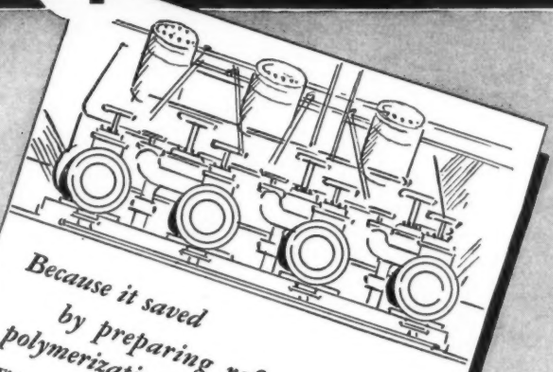
3



Because it saved
by sweetening gas to serve a profitable Domestic market.

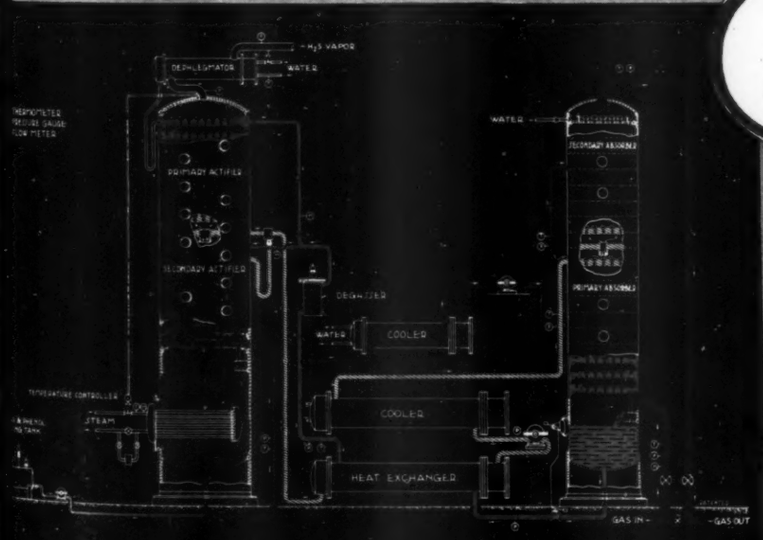
This producer, sinking wells in a field normally sweet, encountered sour gas. Restrictions common in most states prevented the sale of the gas for domestic purposes as originally intended. The entire investment was jeopardized. The installation of a Koppers Phenolate Purification System made the gas marketable, and converted what might have been a serious loss into a profitable operation.

4



Because it saved
by preparing refinery gas for polymerization—inexpensively.

This refiner installed an immense polymerization unit for the production of high-octane motor fuel. A Koppers Phenolate plant prevents the rapid deterioration of the polymerization equipment otherwise inevitable. It also eliminates the necessity for removing, from the finished product, organic sulfur compounds formed from the H_2S. The H_2S is converted to sulfuric acid, establishing an additional credit for the entire operation.



The two-stage
KOPPERS PHENOLATE SYSTEM
Removes and Recovers Virtually All H_2S

This newest development solves the refiners and producers problems when any appreciable amount of H_2S would have a detrimental effect in further processing or utilization. Exclusive features, *fully protected by patents*, permit actification of part of the solution to such a high degree that second-stage scrubbing removes practically all H_2S. This is done without the use of extra steam, and without the great increase in size and cost of equipment, which would be necessary to duplicate the results with separate systems.

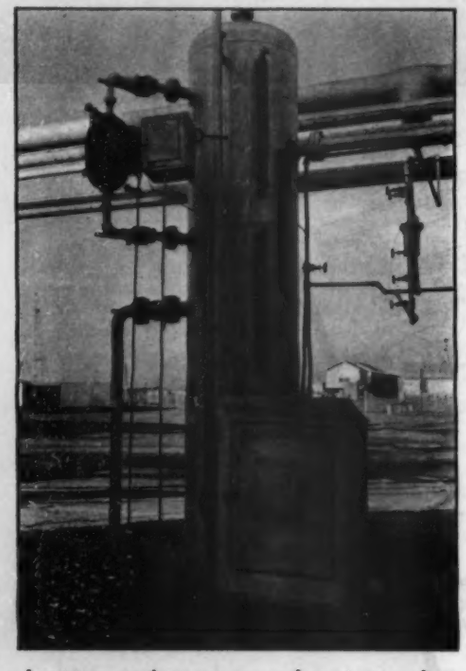
U. S. Patent No. 1,971,798

a KOPPERS *product*

OPERATING IDEAS

Protect Valves From Freezing

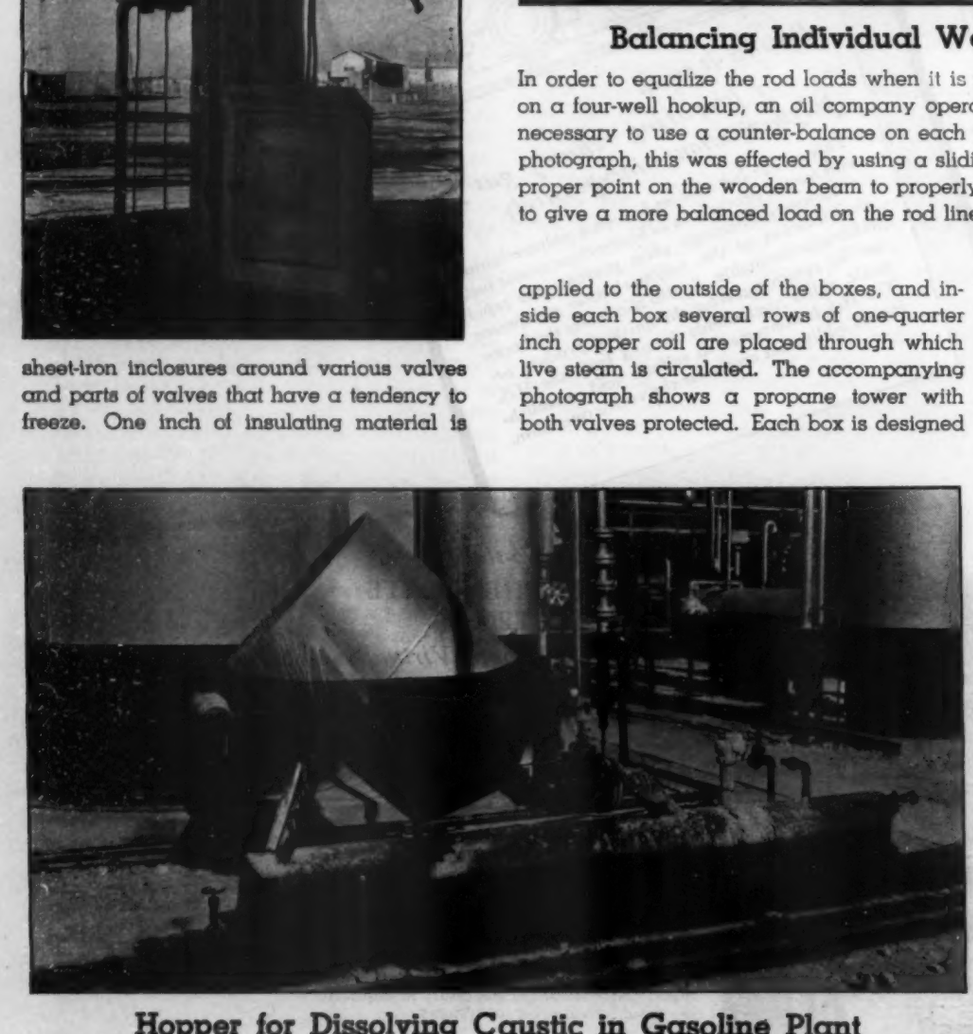
An oil company operating a natural gasoline plant near Drumright, Okla., has designed



sheet-iron inclosures around various valves and parts of valves that have a tendency to freeze. One inch of insulating material is applied to the outside of the boxes, and inside each box several rows of one-quarter inch copper coil are placed through which live steam is circulated. The accompanying photograph shows a propane tower with both valves protected. Each box is designed so that an operator can make any necessary adjustments by merely opening the door. In installations where boxes are filled with cotton seed or other types of loose insulating material it is much more inconvenient to make these adjustments.

Balancing Individual Wells of Four-Well Hookup

In order to equalize the rod loads when it is necessary to pump just one or two of the wells on a four-well hookup, an oil company operating in the Big Springs field of Texas found it necessary to use a counter-balance on each pumping jack. As shown in the accompanying photograph, this was effected by using a sliding concrete block which can be fastened at the proper point on the wooden beam to properly balance the rod load. This practice was found to give a more balanced load on the rod line and to improve the pumping cycle of the jack.



Hopper for Dissolving Caustic in Gasoline Plant

A natural gasoline manufacturer in West Texas has designed a very neat and economical hopper for disolving caustic used in treating sour gas encountered in nearby fields. The hopper is constructed from a piece of 30-inch pipe reduced down to 4-inch pipe at the bottom and is of sufficient capacity to hold an entire drum of caustic. A steam line is turned into the drum to dissolve the caustic and the solution allowed to flow into the reservoir below, constructed from a piece of 12-inch pipe. A sight glass is installed on one end to enable the operator to see the height of the liquid level in the reservoir. In treating the sour gas the caustic solution is picked up by a small pump and injected into the incoming sour gas line.

Steps Aid Oiling of Swing

Topographical conditions required that on one power installation in the East Texas field a high swing be built in order to prevent driftwood from accumulating on the rod lines. To facilitate oiling and servicing of the swing, the concrete platform was made in the form of steps to permit the pumper to have full access to the working parts easily and safely. This swing is installed in a low area subjected to frequent floods.

Treatment of Oil Field Emulsions in East Texas

By B. M. GIVENS
Sun Oil Co., Arp, Tex.

Oil field emulsions may be defined as minute globules of one liquid, oil or water, suspended in a continuous mass of the other liquid.

Emulsions in East Texas are found in two forms. The first is a true emulsion, as the drops of water are microscopic in size and are covered with a protective film which prevents the aggregation of the small drops into large ones. In this form the water cannot be separated from the oil unless the protective coating around the drops of water are ruptured.

In the second form the drops of water are much larger and remain in suspension primarily because of the viscosity of the oil, and these can often be separated by gravity alone. Most crude oil produced in East Texas, that requires treating, contains water in both forms, and it is to the advantage of the production man to keep the formation of the true emulsion as low as possible.

These finely divided true emulsions are increased by the action of turbulent flow at sharp turns in flow lines, by leakage past pump plungers, by flowing through a choke, etc.

Since produced oil must meet pipe line requirements as to the bottom settlings and water content, it becomes necessary for the production department to take care of their emulsions in such a manner that the oil meets these pipe line limitations. It, then, is entirely a production problem of building and operating the most suitable treating equipment to treat the emulsions properly at a minimum of operating expense and upkeep.

There have been developed many methods of treating oil, and here in East Texas, quite a variety of them are being used.

1. Mechanical Dehydration.
2. Electrical Dehydration.
3. Chemical Dehydration.
4. Heat Dehydration.

1. Under the head of mechanical dehydration there is the "water knockout." In flowing production the well choke is placed at the far end of a pressure chamber of some shape which allows the free water to be drained off ahead of the choke. In pumping production a gun-barrel is usually depended upon to remove free water, although a pressure chamber of some type could be used to remove the free water before the trap is reached.

Another type of mechanical dehydration is the "excelsior tank." These so-called "hay tanks" are now being used at Talco and Sulphur Bluff in connection with both heat and chemical, but they have not gained much popularity in East Texas, due to their cost, and the ease with which oil is treated by cheaper methods.

2. The electrical dehydration method could be used in East Texas if provided with suitable preheater, and this system is now being used very effectively in the Cayuga field, but it is not believed to be in use in East Texas.

3. The chemical dehydration method is usually used in connection with heat; however, it is also used in some cases to treat cold oil in connection with a water knockout or gravity settling tank.

A.P.I. — Before East Texas Chapter Meeting, Kilgore, Texas, February 15, 1938

The most effective chemical formula should be selected through suitable field and plant tests. The chemical injection equipment should be located at the most effective point. In cases where few wells are cutting, it will probably be best to inject the chemical as near the offending wells as convenient; however, where treating plants are installed, it has often proved satisfactory to inject the chemical at a point where the production leaves the lease manifold and thereby use only one chemical lubricator on the lease.

The chemical injection equipment selected, should preferably be of a type that will give a positive and properly regulated feed of chemical with a minimum of care and attention.

The amount of chemical to be used will have to be determined after considerable experimentation with the plant itself, and as chemical is often one of the major expenses of treating oil, it is advisable to determine the least possible amount which will secure the desired results.

This so-called "proper amount" of chemical is best obtained by starting with a slightly excessive amount and gradually reducing it until a "proper minimum" is determined.

4. Dehydration by the use of heat is one of the oldest and most effective methods of treating oil, and in East Texas, heat has proved to be a primary factor in breaking down emulsions, for here very few instances of successful treating can be cited where there is not some form of heating system. There are cases, however, where wells are producing such a high percentage of water that the water produced carries sufficient heat to effectively do the treating with the addition of only a small amount of chemical.

Methods of Applying Heat

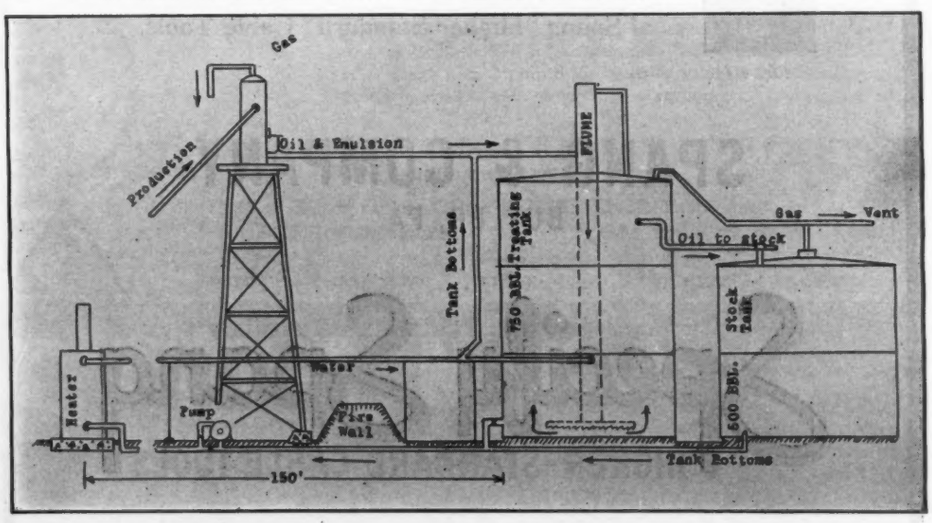
Various methods of applying heat are being used. Some use the direct injection of raw steam into the open tanks. One producer has a long heat exchanger wherein steam, in a closed system, is used to warm the production to the proper temperature for treating. Quite a number of operators are using a direct-heating system and pass the production through an oil-field boiler or some other suitable heater to warm it to the proper temperature for treating. Other operators pass their production through a layer of hot water in a treating tank and thereby give the oil a final hot-water wash before the settling stage.

Gun-Barrels and Settling Tanks

As generally considered, the purpose of the gun-barrel is to separate the free water from the oil and dispose of it through a siphon, while the oil passes on to the settling tank, where the action of gravity completes the oil-treating process.

There is now in operation in the East Texas field several treating plants built somewhat along the lines of the following design. These plants are found to be not only economical in operation, but also reasonable as to construction cost.

A 750-bbl. tank may be used for a combination gun-barrel and treating tank. By carrying from 8 to 10 feet of hot water in the 24-foot high tank, and passing the production down through a flume, out near the bottom of the tank through a spreader



An East Texas treating system using a 750-bbl. combination wash tank

and then up through the hot wash water, it has been found that a very satisfactory job of treating the oil has been done.

The temperature of the wash water is maintained by circulating it through a gas-fired heater and back to the treating tank by means of a circulating pump. This pump is usually about 1½-inch centrifugal, driven either by a 3-hp. electric motor or a small gas-gasoline engine. Circulation may also be caused by a thermosiphon system.

It has been found by experience that practically all emulsions produced in East Texas can be broken down by temperatures ranging from 110° to 140° F. The treating-tank temperature may be regulated by means of a thermostat which keeps a very close regulation on the system.

Where a circulating pump is used, a line should be installed between the stock-tank drains and the pump suction, so that a bad tank of oil or a tank bottom may be circulated through the treating plant, thereby eliminating most tank cleanings, except in cases of thick paraffin accumulations which have to be cleaned out by a tank-cleaning crew.

There is at least one operator in this field who has operated a system of this type on a 12-well lease for 38 months without cleaning a tank bottom other than circulating the bottom through the system.

A treating system as described is as near automatic and maintains treating conditions as nearly constant as any that has been used in the East Texas field. Very little attention is required and the lease pumper has time to attend to other work, leaving the treating system to operate with a minimum of attention, once it is started and regulated.

In warm weather very little or no chemical is used on most of the leases employing this type of treating system, while in cold weather some chemical is injected into the header manifold through a lubricator, the amount used depending upon the tightness of the emulsion being produced.

Emulsions produced from wells making around 5 per cent or less water are usually more difficult to treat than those from wells producing greater percentages of water.

A treating system employing a 24-foot high, 750-bbl. gun-barrel (treating tank) will easily treat oil at the rate of 40 to 80 bbls. per hour. On small leases a smaller treating tank may be used if the rate of flow is also reduced.

Such a treating system using a 750-bbl. treating tank can be constructed at an approximate cost as follows:

750-bbl., 24-ft. high, steel tank gun-barrel, with bottom and lower ring 8 ft. high of galvanized wrought iron, flume inside	$1,083.65
Heating boiler	500.00
Centrifugal circulating pump, electrically driven	138.00
Connections and fittings	409.00
Labor to install and hook up	219.00
Teaming and trucking	78.80
Gas regulator and thermostat (for heating system)	76.70
Total	$2,505.15

The above estimate has been arrived at by taking the cost of installing several plants of the same size and design, all installations being within a few dollars of the cost as shown.

Standardization

While on the subject of treating systems for East Texas emulsions, it might be well to suggest that there are advantages to be had in selecting and standardizing on one most suited for the individual operator.

After building the first treating system and a detailed description is on hand, a crew of men can make good time in the construction of like systems for other leases as they are needed, thus much trouble and delay can be eliminated in equipping a lease with a treating system when necessary.

With all treating systems alike, it is much easier for the relief man to operate the different leases he has to handle, and this is of importance in maintaining smooth operation of the leases.

In selecting the various units from which to build up a standard treating system for East Texas, it might be well to mention a few points that have come to the attention of the writer.

Selection of Treating Heater

In selecting a heater which will maintain desired temperature for a 750-bbl. treating tank, it is most important to secure one with sufficient heating capacity. In this case certain factors can be calculated and others have to be determined by experiment and actual use. If the most desirable rate of production is known, the temperature rise necessary for mid-winter can be assumed and the heat required to raise the temperature of that amount of fluid from 32 to 125 degrees calculated.

Experience has shown that more heater capacity will be required to take care of heat losses from a steel treating tank on a cold winter day than is required to warm the incoming fluid.

Gun-barrel heaters of the fire-tube type are usually more satisfactory than those of the water-tube type, because most Woodbine waters produced in East Texas soon deposit a thick layer of scale within a heater. Several instances are known where the water tubes were completely plugged with a scale which had to be removed before the heater could be used.

The deposit consisted principally of calcium carbonate and it was removed by circulating a commercial inhibited acid solution through the coil until it was cleaned. To clean the scale from a fire-tube type heater it is usually necessary to open up a hand-hole and remove the scale accumulations by hand.

Selection of Treating Tank

In the selection of a treating tank, there will be a considerable number who prefer a redwood tank of vapor-tight construction. Such tanks hold heat very well and those constructed of the new

(Continued on Page 107)

KNOW THESE THINGS ABOUT COLLAR SOCKETS

Fig. 611

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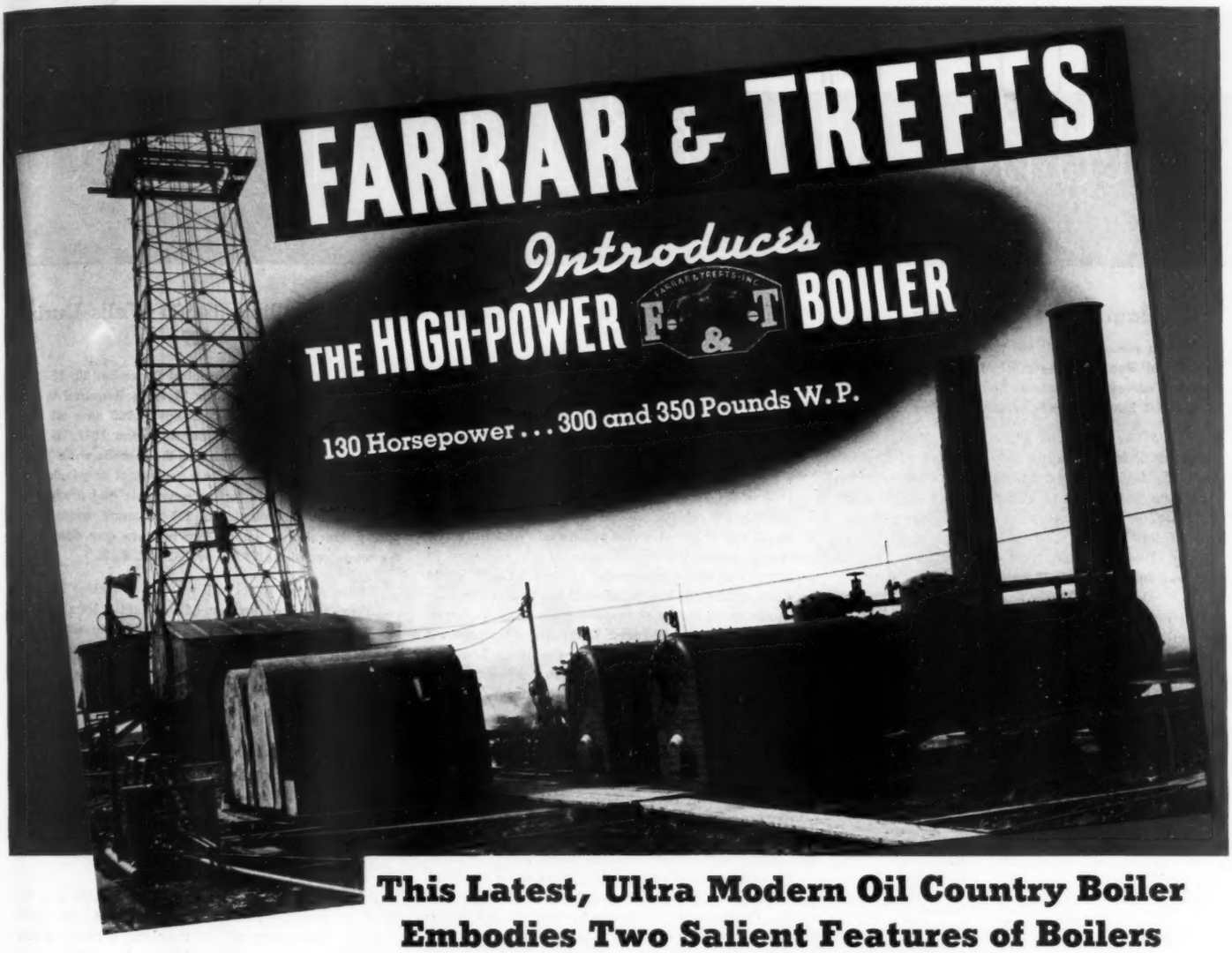

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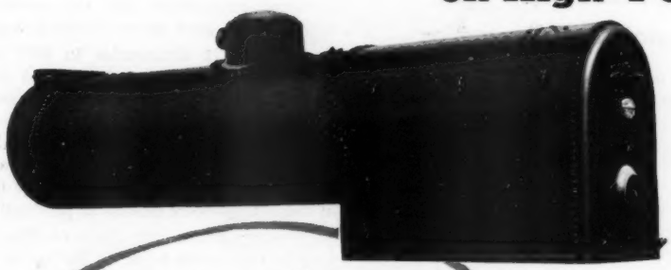

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PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Magnetometer Surveys

Will you please furnish me with the date on which The Oil and Gas Journal published an article on magnetometer surveys of various South Texas structures. The article I have in mind included Medina County.—R. A. J.

During 1928, 1929 and 1930 a series of special articles by L. Spraragen on magnetometer surveys in various parts of the United States were published in The Oil and Gas Journal. Those pertaining to Texas were:

December 20, 1928 — page 25
January 8, 1929 — page 34
May 15, 1930 — page 42

The last listed article is entitled "Use of Magnetometer in South Texas."

The complete list of the L. Spraragen articles follows:

Date—	Page	Area covered
Sept. 27, 1928	38–39	General
Oct. 4, 1928	32	General
Oct. 11, 1928	41	Kansas
Oct. 18, 1928	57	Kansas
Oct. 25, 1928	50	Kansas
Nov. 1, 1928	33	Oklahoma
Nov. 8, 1928	37	Oklahoma
Nov. 15, 1928	42	Oklahoma
Dec. 20, 1928	25	Texas
Jan. 3, 1929	34	Texas
Jan. 24, 1929	30	Arkansas
Feb. 14, 1929	42	Arkansas
Apr. 4, 1929	103	Louisiana
Apr. 18, 1929	85	Louisiana
May 16, 1929	34	Mississippi
June 6, 1929	48	Mississippi
June 27, 1929	101	Mississippi
Jan. 2, 1930	37	Alabama
May 8, 1930	56	Mississippi
May 15, 1930	42	South Texas
June 12, 1930	91	Lea Co., N. Mex.
June 26, 1930	34	Lea Co., N. Mex.

Probable Life of Limestone Oil Fields

Do you have information that will enable you to form an opinion as to the average life of limestone fields? As we are interested in trying to estimate the probable life of Turner Valley oil field your opinion will be appreciated.—C. G.

The life of the Turner Valley field will depend upon the demand rate for this oil. As the field is now prorated on the basis of 35 per cent of the well's potential it is quite obvious it is going to take three times as long to secure any given quantity of oil. The demand rate being an unknown factor it is very hard to make any comparison with other limestone fields.

For instance the old limestone fields of Lima-Indiana district only had 7 years average life between 1885 and 1892 whereas wells in that same area had average life of 24 years following 1900. In the first instance the wells were produced to their full capacity by open flow, later the pressure in the field had so declined that the wells had to go on the pump practically as soon as completed.

Another well known limestone field was located in Mexico. The so-called Tamasopo limestone was very productive along the "Golden Lane." Big wells were the rule and they were flowed wide open much of the time. The wells were relatively short lived and salt water broke in and killed them in about 10 years. The production per acre varied from 20,000 to as high as 80,000 bbls. per acre and in isolated cases even higher. The average has been placed at about 40,000 bbls. per acre.

While these instances may give some criterion by which the life of Turner Valley wells might be gauged in my opinion there are many other fundamental conditions which will enter into the problem and will make estimates of life of wells there very difficult.

One of these problems involves a study of the source of the oil found on the west flank of the field. As the original wells produced "distillate" or gas from which the condensates were removed in separators at the surface and the west flank wells produce crude oil, has condensation taken place in the pore space in the formation? As large volumes of gas have been produced from the structure up dip and the formation pressure has been lowered has it resulted in part of the gas in the west flank part of this formation condensing under ground and forming the oil now found there?

If such is the case and facts obtainable in the field bear out this theory then the quantity of oil to be recovered will depend upon the original volume of gas in place at formation pressure and temperature and the proportion of it that has condensated. The next problem would be to determine how much of the condensates could be recovered.

This theory will of necessity have to be checked by field investigation and until many of these and similar fundamental facts are known about Turner Valley field it will be hard to predict recovery per acre or the probable life of the field.

Horizontal Tank Capacities

Can you give me a formula or any other information on how to compute the barrels of oil in horizontal tanks?—M. C. H.

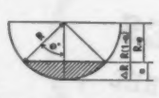
Complying with your request we have secured the following formula from the Chicago Bridge & Iron Co. and trust it will serve your purpose.

8. Volume or contents of partially filled horizontal cylindrical tanks:

(8a) Tank cylinder or shell (straight portion only)

$$Q = \frac{R^2 L\,(\pi\,\theta° - \sin\theta\,\cos\theta)}{180}$$

Q = partially filled volume or contents in cubic feet.
R = radius of cylinder in feet
L = length of straight portion of cylinder in feet.
The straight portion or flange of the heads must be considered a part of the cylinder. The length of flange depends upon the diameter of tank and thickness of head but ranges usually between 2 and 4 inches.



a = Δ R = depth of liquid in feet

$\Delta = \frac{a}{R}$ = a ratio

$\text{Cos}\ \theta = 1 - \Delta$, or $\frac{R-a}{R}$ (θ is in degrees)

(8b) Hemi-ellipsoidal Head:

$Q = \frac{3}{4}\,V\,\Delta^2\,(1 - \frac{1}{3}\,\Delta)$

Q = partially filled volume or contents in cubic feet
V = total volume of one head per formula (7d)

$\Delta = \frac{ac}{R}$ a ratio

a = Δ R = depth of liquid in feet
R = radius of cylinder in feet

(8c) Dished or Basket Heads:
Formula (8b) gives partially filled volume within practical limits.

(8d) Bumped Heads:
Formula (8b) gives partially filled volume within practical limits, and formula (7f) gives V.

Note: To obtain the volume or quantity of liquid in partially filled tanks add the volume per formula (8a) for the cylinder or straight portion to twice (for 2 heads) the volume per formula (8b), (8c) or (8d) for the type of head concerned.

Cost of Drilling 32,560 Wells During 1937

In The Oil and Gas Journal of December 23, 1937, an article by you entitled, "New Methods Required to Find Future Reserves," it is stated that 33,000 new oil wells were drilled in the United States during 1937. Is there any estimate as to how many of those wells were "legitimate," that is, were drilled on geological or geophysical evidence and were in fact a reasonable and prudent expense of the oil industry and how many were of the purely speculative type? Also is there any data as to the total cost of the 33,000 wells?—H. K. S.

There is no practical way of making a close estimate of the number of oil wells located following geophysical exploration of the area.

Of the 32,560 holes drilled in 1937 23,600 oil wells were completed. If you will study the table on page 62 of The Oil and Gas Journal of January 27 you will find detailed report of those wells and you will note a large number of them were drilled in old productive areas.

In the first article in that same issue on page 38 you will find a discussion of reserves found during the past three years. On pages 40 and 41 there is a map showing the approximate location of more than 220 new fields discovered during the past year.

Practically all of the discovery wells are located in areas explored by geophysics. To state that the discovery of oil resulted directly from the geophysical work would not be exactly correct but on the other hand it is a fact that geophysical exploration did aid materially in the study of the area before drilling was started.

Having 221 discoveries in 1937 it would be necessary to list all tests located more than 1 mile from production and record results and set that figure up against the 221 discoveries in order that the percentage of wildcats drilled to oil wells found might be determined. There are 6,420 dry holes recorded in the table on page 62 but many of those tests were drilled in productive territory.

In a report recently made for Gov. E. W. Marland of Oklahoma by Alex McCoy of Ponca City, Okla., it is estimated that the average cost of drilling 3,500-foot oil wells has been $35,000 each during the past 13 years but it is further estimated oil wells will have an average cost of $45,000 each in the immediate future.

Dry holes are estimated to have cost $25,000 each during the past 13 years and will cost $30,000 each in the future.

These figures are empirical only and probably low because they are based upon wells of 3,500 feet average depth and under present conditions it is probable the average depth is deeper for wells now being drilled.

To the estimated cost of drilling wells must be added several other items of expense and the total cost will therefore be much higher than the figures given above. Without a lot of detailed study it is impossible to arrive at a true estimate of the total cost to the industry of drilling the 32,560 wells completed in 1937. Individual wells have varied in cost from $5,000 to as high as $250,000, so one expensive wildcat would represent the outlay of sufficient money to drill 50 oil wells in some proven territory.

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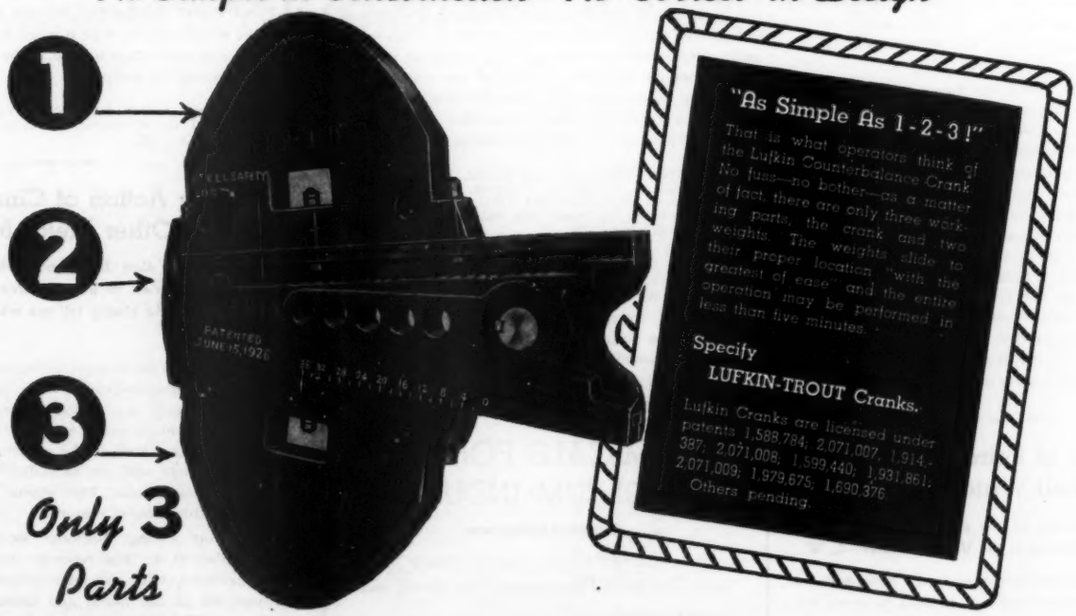

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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Italian Tar Test Similar to Tar in Cylinder Stock

A report showing the analysis of a sample of Louisiana crude oil from the Lisbon field contains the item "Italian Tar - - - 32 per cent." Will you please explain the significance of this test and the procedure for making it?—P. I. T.

When making inspections of fuel oil for delivery to the Italian government it is the practice to make a determination of tar, the procedure being based on the method frequently used for the determination of tar in cylinder stocks. The test is sometimes made when examining crude oils to be exported, hence the designation of the test as Italian tar.

The following is a description of the method.

Pour 50 ml. of the oil into a 100-ml. graduated cylinder, which is graduated from the bottom up and fitted with a glass stopper, add 50 ml. Stoddard solvent and insert stopper. The cylinder is then immersed in a 135° to 145° F. bath for 15 minutes. Then shake to obtain a thorough mixture. Set the cylinder in a 95° to 100° F. bath for one-half hour, add 10 ml. of C.P. concentrated sulfuric acid, previously brought to the same temperature, then shake the mixture for five minutes. Hold the cylinder and contents at 95° to 100° F. for 24 hours. A blank should be run at the same time.

Using the same precaution as outlined above, 50 ml. of solvent is agitated in the prescribed manner with 10 ml. of the standardized acid contained in the standard tar test cylinder. The cylinder is then placed in the bath with the one containing the oil sample and allowed to stand for 24 hours.

At the end of 24 hours the two cylinders are inspected without disturbing them any more than necessary. Before recording the volume of sludge layer, rub the upper edges of the sludge with a long glass rod to be certain that the apparent sludge layer is in fact the true one. It sometimes happens that the sludge in settling leaves a line much higher than the final sludge line. If the test with the rod is not made, a fictitiously high value may be obtained. The volume of the sulfuric acid layer in each is recorded to the nearest 0.5 ml. The number of ml. in the acid layer of the blank determination is then subtracted from the number of ml. in the acid layer of the oil test. The remainder is multiplied by two and the result is reported as "percentage of tar" in the sample examined.

Radio-Activity of Petroleum and Oil-Well Waters

Is there any evidence of the presence of radium in any of the crude oils found in the United States?—L. W.

The literature appears to contain very little definite evidence of the actual presence of radium in crude oil. It is well known that the total quantity of minerals present in petroleum is very small, usually being approximately 0.01 per cent of the weight of the oil. Therefore, any radium present would be difficult to detect and a quantitative determination would require a large quantity of oil to be concentrated for a delicate separation requiring extreme care by an expert chemist of special training.

Petroleum and petroleum products are reported to have a much greater capacity for absorbing the emanations of radio-active elements than water, so it is to be expected that fresh oils, collected at the wellhead, may show strongly radio-active. Himstedt and Klaus have reported some foreign oils as being radio-active. The reason that more crude oils produced in the United States have not been reported to be radio-active is probably to be found in the fact that samples have been drawn from storage tanks where the oil has been in contact with water containing sulfates. This condition favors extraction of radium from the oil, as will be explained.

Holbrook G. Botset has made a study of the radium content of connate waters collected in Oklahoma. When selecting an analytical method various surface waters were examined. The sample from the Allegheny River contained an appreciable quantity of radium and water from the Gulf of Mexico was reported by others to be radio-active.

The principle of the method selected is that when barium is added to a solution containing traces of radium and then precipitated as the sulfate, the radium is carried down. The resulting sulfate is washed, dried and then fused with sodium-potassium bicarbonates. The mass is washed free of soluble salts and filtered. The insoluble carbonate is dissolved in hydrochloric acid and the resulting solution sealed and set aside for a few days. The radiation is then measured by the Lind method. The barium sulfate precipitate was obtained in the field from 2 gallons of water, then sent to the laboratory for further treatment.

Botset found that the radium content of a connate water appears to be as definite a characteristic of that water as is any of the other salt constituents.

There is one limiting factor which will control, to a certain extent, the radium concentration, and that is the amount of sulfate present in the water. The solubility product constant for radium sulfate is so extremely low that only a very small amount of sulfate is sufficient to precipitate some radium from solution. Consequently only sulfate free waters would be expected to contain large amounts of radium. One of the characteristics of connate as distinguished from surface waters is the small concentration or absence of sulfate ion, particularly in waters associated with petroleum fields.

References: Himstedt and Klaus, Physik, Zeitschr, 5, 210; 6, 820. H. G. Botset, Physics, 5, 276, 1934. J. L. Bohn, J. Frank. Inst., 210, 461, 1930, Radio-Active Properties of Rocks, Soils, Crude Oils and Waters from Southern California.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Orthodichlorbenzene

Use—Solvent for tar, wax, and gums; paint removers; special preparations; fly sprays and termite control.

Formula—$C_6H_4Cl_2$.

Molecular weight—146.96.

Form—Colorless or light yellow oily liquid.

Specific gravity—1.30.

Boiling point—354° F.

LIMITATIONS

Distillation range 90% at 342° to 356° F.

Flashpoint (open) min., 149° F.

Freezing point from 0° to —6.7° F.

Note. Available in several degrees of purity.

Method for Determination of Wax in Petroleum Oils

Is there a simple reliable method for determining the percentage of wax in crude oil and other oils? The methods we have tried are too involved and give poor checks.—T. M. I.

A method for the analytical estimation of the wax content of petroleum oils has been prepared by the Universal Oil Products Co., which is not at all complex. Duplicate determinations should agree within 1 per cent.

Dissolve approximately 3 grams, accurately weighed, of the sample in 500 ml. of petroleum ether (boiling range 90° to 150° F.), by agitation in an Erlenmeyer flask. Add 15 grams of fullers earth to the flask and continue the agitation for 15 minutes. Filter the solution through an asbestos mat on a Gooch crucible and evaporate the petroleum ether on a steam bath, the last traces being removed by the use of a vacuum. Note that the oil and wax now has a light color. Add 200 ml. of a mixture of 75 per cent acetone and 25 per cent petroleum ether while the wax-oil mixture is still warm. Chill the resulting solution to 0° F. and filter through an asbestos mat on a Gooch crucible surrounded by a cold filter funnel. Dissolve the retained wax on the asbestos mat by washing with hot petroleum ether into a weighted flask. Distill off the petroleum ether on a steam bath using a high vacuum to remove the last traces. Weigh the wax in the flask.

Do not heat or evaporate the petroleum ether over a free flame or a hot plate. Be sure to use a steam bath.

The weight of the wax divided by the weight of the sample and multiplied by 100 is the percentage of wax in the original oil sample.

Reference: U.O.P. Laboratory Test Methods for Petroleum and Its Products, Paraffin Content of Petroleum, page 28.

Corrosive Action of Cinders on Pipe and Other Metal Material

Cinders and slag from coal when present in the ground are reported to be corrosive to pipe and other material. Will you kindly tell me what is the reason?—A. L. C.

The action on the several metals of cinders, unburned coal particles and associated material, when present in soil, is due largely to chemical action. This is explained that cinders contain particles of sulfur, iron sulfide and several sulfates, which, in the presence of moisture tend to form sulfuric acid, an exceedingly active substance on all common metals. Pipe should not be laid in soil containing this kind of material.

Dr. Scott Ewing, National Bureau of Standards, Washington, D. C., has recently published a study of pipe corrosion, with special reference to the chemical composition of the metal and mentions the influence of cinders. This is quoted from the reference.

"Any condition which sets up potential differences on a copper surface will cause corrosion. Contact with cinders containing unburned carbon will produce rapid and serious pitting. Copper is rapidly attacked by hydrogen sulfide with the formation of copper sulfide in the form of a black adherent scale, which, however, does not appear to protect the metal. Hydrogen sulfide is produced in tidal marshes through the decomposition of organic matter. There are other conditions which may produce rapid corrosion of copper, such as rapid motion of the solution and certain conditions at the surface of some liquids, but these conditions are not likely to occur in the soil."

Reference: Dr. Scott Ewing, Pipe Corrosion, Gas Age, Nov. 11, 1937, page 25.

FIELD OPERATIONS

Summarizing the Week's Developments

TEXAS—The K.M.A. pool in Wichita County is the busiest in the world, with 151 wells drilling for the deep pay. A 3-mile northwest extension test filled 1,000 feet with oil after it was shot. The eastern boundary of the pool has been further marked by a hole that was dry at 3,974 feet, but it will be deepened. The Sims area in Young County was extended, and a new pool was opened 7 miles northwest of Jacksboro, in Jack County. In the Permian Basin area, the Wasson-Denver field in Gaines and Yoakum counties is promised a 1½-mile eastern extension and outposts on three sides of the Slaughter pool in Hockley County look like extension wells, having logged saturation in the field pay. The Seminole pool in Gaines County was extended northward a quarter of a mile. In the Gulf Coastal district the first oil pool in coastal waters was opened Saturday in a test in Galveston Bay which flowed 22 bbls. of oil per hour through a quarter-inch choke. The Continental Oil Co. extended the Villa Platte field in Plaquemines Parish, Louisiana Gulf Coast, 1 mile with a 430-bbl. well flowing 41-gravity oil through a three-sixteenths inch choke. The new West Saxet pool in Nueces County, Southwest Texas, was extended 1,500 feet by a 350-bbl. well, flowing through a three-sixteenths inch choke. A pool was opened in San Patricio County.

KANSAS—Kansas City lime production was uncovered near the South Gurney pool, in section 2-15-14w, Russell County. Wildcats opening new producing areas were completed in section 4-22-8w, Rice County, and section 18-28-1e, Sedgwick County. Gas production in the Burrton field, Reno County, was put on an allowable basis for the first time, the monthly figure being 923,367,000 feet.

OKLAHOMA—A Wilcox sand pool was opened in section 10-13-10, Okfuskee County, and a nearby wildcat in section 21-13-10, was showing as a Dutcher sand well. A well on the west side of Cement pool, Caddo County, had gas estimated at more than 100,000,000 feet per day. Three wells offsetting the discovery in Ramsey pool, Payne County, were nearing pay levels. Sixteen new wildcat operations were reported.

NEW MEXICO—The South Eunice area, Lea County, was extended a quarter mile southwest in section 18-22-36. A wildcat in section 15-25-28, extreme southern Eddy County, flowed an estimated 1,000,000 feet of sweet gas from Delaware lime pay. A wildcat was spudded in section 5-25n-24, Colfax County.

CALIFORNIA—The Wilmington field increased production to 91,268 bbls. per day and California to 738,250 bbls. per day. Five wells in Wilmington produce an aggregate of over 25,000 bbls. per day. Barnsdall Oil Co. definitely proved up its Newhall pool with a 1,660-bbl. well.

ILLINOIS—A well that flowed 2,412 bbls. in a 30-hour test was the best of the week in Illinois. It is in Richland County, and was not yet officially completed.

MICHIGAN—The Edenville discovery well, in Midland County, increased its production to 1,000 bbls. a day when it was deepened to 5 feet in the Dundee limestone. A 14,000,000-foot gasser in Clare County and a westerly extension to the Buckeye pool in Gladwin County, were added features.

Completions in All Fields

(Week Ending February 14, 1938)

	Oil	Gas	Dry	Total	1938 total comp. to date	1937 total comp. to date
N. Y., Pa. and W. Va.	66	23	3	92	886	599
Ohio	0	10	2	12	128	115
Indiana	0	0	0	0	12	24
Kentucky	6	13	4	23	96	17
Illinois	5	0	4	9	67	1
Michigan	5	1	6	12	86	95
Kansas	23	1	12	36	254	243
Oklahoma	17	2	5	24	223	292
Texas:						
North Central Texas	34	0	19	53	306	314
West Texas	33	1	9	43	308	277
Texas Panhandle	14	4	1	19	109	71
East Texas	44	0	1	45	323	248
East Central Texas	1	0	1	2	53	80
East Texas border	3	0	0	3	20	62
Gulf Coast Texas	19	0	2	21	148	144
Southwest Texas	32	1	9	42	255	403
Total Texas	180	6	42	228	1,522	1,599
North Louisiana	6	0	3	9	78	52
Gulf Coast Louisiana	3	0	3	6	70	47
Total Louisiana	9	0	6	15	148	99
Arkansas	4	0	0	4	28	9
Montana	0	0	0	0	6	12
Wyoming	0	1	1	2	20	11
Colorado	0	0	0	0	0	3
New Mexico	11	0	3	14	79	84
Utah	0	0	0	0	0	0
California	18	0	10	28	193	164
Total United States	344	57	98	499	3,548	3,367
Total previous week	384	36	81	501		
Difference	40	21	17	2		

Outstanding Fields--Highlights

(Week Ending February 14, 1938)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Hastings	5	9	2	1,112	469	18,325
McCampbell	2	5	1	150	104	4,326
Saxet	4	7	2	132	584	34,287
Benavides	2	10	3	386	141	5,816
East Texas	41	89	42	2,350	24,547	424,650
Talco	3	4	2	170	613	24,198
K.M.A.	59	151	11	7,743	135	7,000
Ector County	19	79	9	8,279	868	25,820
Winkler County	8	25	2	426	1,573	37,600
OKLAHOMA						
Fitts-Jesse	4	16	2	831	959	67,125
Oklahoma City	5	11	0	0	1,055	100,000
KANSAS						
Barton County	7	23	3	3,944	292	10,215
Ellis County	4	21	2	5,295	278	8,795
Rice County	7	24	4	3,851	1,103	33,925
Russell County	10	43	5	4,313	1,005	28,805
NEW MEXICO						
Lea County	15	109	7	3,979	1,622	96,690
LA-ARK-TEX						
Rodessa, Ark.	2	8	1	155	63	7,925
Rodessa, La.	1	5	2	295	445	44,435
Rodessa, Tex.	3	12	3	1,100	394	30,725
Lisbon, La.	1	15	2	2,735	172	9,140
Shuler, Ark.	4	16	3	5,036	31	13,460
MICHIGAN						
Buckeye	4	30	0	0	353	25,628
ILLINOIS						
Central Illinois	25	105	5	2,154	275	24,015
CALIFORNIA						
Wilmington	12	26	5	5,226	358	91,250

North Louisiana, Arkansas

By GEORGE WEBER

Prospects of Second Pool in Columbia County, Arkansas

SHREVEPORT, La., Feb. 14.—Indications of a new producing area in Columbia County attracted considerable attention this week to southern Arkansas. The showing in a wildcat drilling east of the town of Magnolia is believed to presage the opening of another field in the deep lime which produces at Buckner and Shuler.

The Lisbon field of Claiborne and Lincoln parishes, North Louisiana, is attracting interest as outposts extend production. Cotton Valley operators continue to core saturation in the intermediate Holloway sand, which is now apparently proven over a wide area. Its recent development brought in the past week the first proration measures for the horizon. Bull Bayou, Sugar Creek, Sligo and Buckner shared interest during the week with new developments.

Rodessa Completions

The Louisiana side of the Rodessa field gained two producers. Clark Oil Corp. No. 1-C Sharp, section 4-23-16, flowed 20 bbls. per day in heads through open tubing. Total depth is 6,045 feet. Casing pressure was 350 pounds and tubing pressure zero.

Union Producing Co. No. 6 Harris, SW cor. SE SW section 10-23-16, made an initial production of 276 bbls. on a quarter-inch choke with tubing pressure of 350 pounds and casing pressure 100 pounds. The test was acidized with 3,000 gallons. Total depth is 5,940 feet.

Marion County

The Jefferson-Lodi area of Rodessa, most active section at present, saw three completions. George Barham No. 2 Brantley, in the Bennington Survey, made 18 bbls. per hour on a three-eighths inch choke with tubing pressure of 200 pounds and casing pressure of 750 pounds. Total depth is 6,022 feet. Two thousand gallons of acid was used.

Gulf Refining Co. No. 1 Beal, in the Coy Survey, came in making 195 bbls. per day on a quarter-inch choke, with tubing pressure 130 pounds and casing pressure 1,350 pounds; total depth, 6,111 feet.

Shell Petroleum Corp. No. 2 Cooke and others, Gentry Survey, was completed for 474 bbls. per day on a quarter-inch choke, with tubing pressure 500 pounds and casing pressure 1,250 pounds; total depth, 6,087 feet.

Sligo Test

In southern Bossier Parish, on the flank of the Barksdale flying field, the third well in the new 3,100-foot horizon of Sligo, is near completion. Triangle Drilling Co. No. 2-A Herold, in the northwest corner of section 13-17-12, cored saturated lime at 3,116-19 feet and recovered 2,800 feet of oil in 20 minutes on a drillstem test at 2,980-3,006 feet. On a second test at 3,018-24 feet the well flowed 20 minutes and then showed 130 feet of salt water on bottom. Casing was then set at 3,110 feet, above the salt water.

Lisbon Developments

The Lisbon field is attracting attention with new edge developments and good producers. G. H. Vaughn's No. 3 Eppinger, NW SW section 29-21-4, made 40 bbls. of oil the first hour on a production gauge through a half-inch choke at a tubing pressure of 250 pounds and casing pressure of 500 pounds. Saturated lime was cored at 5,110-19 feet, total depth 5,125 feet.

In the Lincoln Parish section of the field, Lyon & Neely No. 1-B Patton Estate, SE SE section 6-20-4, gauged 74 bbls. per hour on a three-quarter inch choke with tubing pressure of 150 pounds and casing pressure of 300 pounds; total depth, 5,303 feet. Both wells were acidized, the first with 3,000 gallons and the latter with 6,000 gallons.

Following the extension of the field to the southwest last week by Schuster No. 1 Lloyd, attention is now directed to the Delta Drilling Co. No. 1 Weiss & Tatum, located in a southeast outpost position in Lincoln Parish. The test cored lime saturation at 5,325-31 feet, a shale break at 5,331-37 feet, and lower saturation at 5,337-41 feet, and will make an early completion test.

Deep Sugar Creek Test

In the Sugar Creek area of Claiborne Parish, the deep test, Union Producing Co. and Standard Oil Co. of Louisiana No. 2 Brownfield, in section 5-19-5, is bottomed at 9,964 feet. Operators have set plug at 8,850 feet to straighten hole, which was reported 20 degrees off vertical.

Cotton Valley Proration

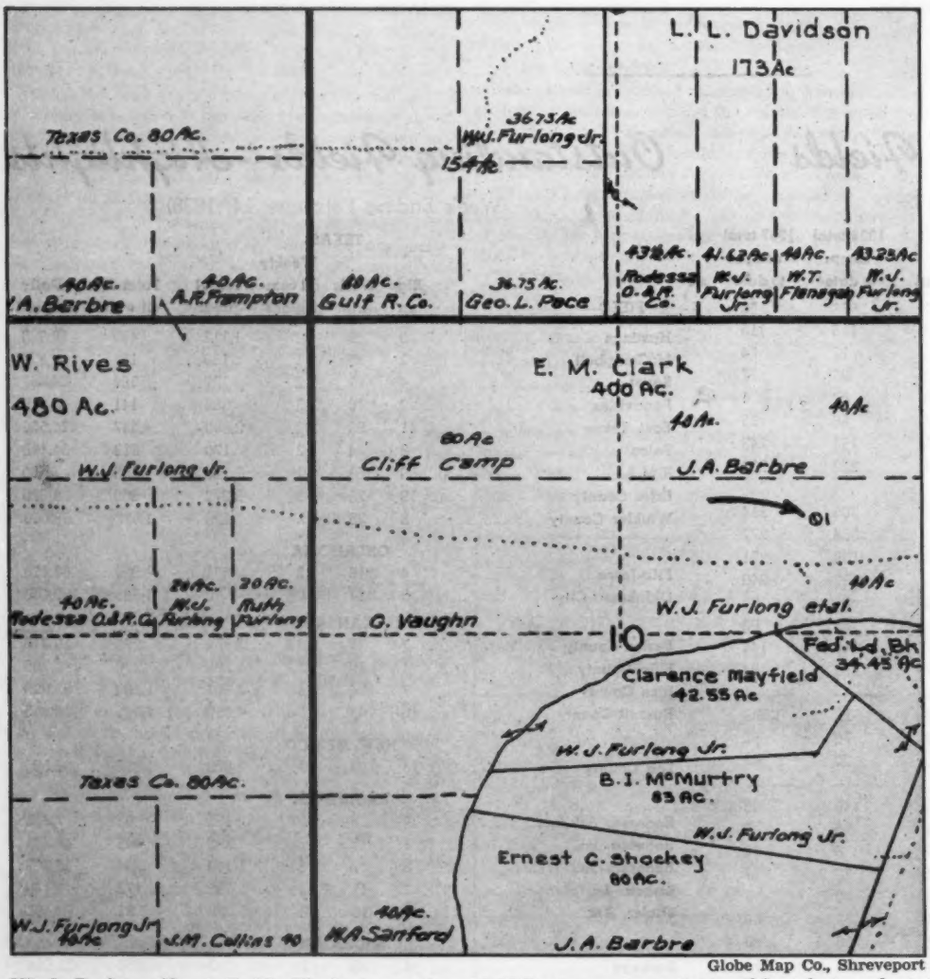
Production in the recently developed Holloway sand of Cotton Valley was curtailed by the first proration measures to be applied to the horizon. Three wells have been flowing unrestricted from the sand, which occurs at about 5,900 feet. Three active tests cored the saturated Holloway sand in the past week. Of these, the North American Oil Consolidated Co. No. 1 Stewart, C SE NE section 32-27-10, extends the apparent production one-half mile to the west. The test cored the sand at 5,886-94 feet and has 9⅝-inch casing set at 5,866 feet. Total depth is 5,906 feet.

The other two tests also cored good saturation. H. L. Hunt Oil Co. No. 1 Hope, C SW NW section 24-21-10, has 7-inch casing set at 5,838 feet after coring sand at 5,632-42 feet, with 8 feet of saturation. A. G. Oliphant No. 2 Banks, C SE NW section 34-21-10, has the Holloway sand at 5,740-57 feet and has also set 9⅝-inch casing at 5,728 feet with total depth at 5,804 feet. Two of the operators have set the larger size casing to allow them to deepen to the 8,200-foot Bodcaw sand in case of failure at the Holloway horizon.

New Field Possibility

Lively interest is being shown in Kerr-Lynn Oil Co. No. 1 Barnett, section 14-17-20, in Columbia County.

(Continued on Page 90)



Globe Map Co., Shreveport

W. J. Furlong No. 1 E. M. Clark, in section 10-20-7e, is an important wildcat being deepened in Morehouse Parish, about 10 miles east of the Monroe gas field. The test, which reached contract depth of 6,000 feet several weeks ago, has 9⅝-inch casing set at 2,805 feet, and is now washing to bottom to deepen to the Big lime

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Eastern Field Report

By STAFF CORRESPONDENT

Only New Wells of Interest Are Oriskany Sand Gassers

PITTSBURGH, Pa., Feb. 14.—Nothing of unusual importance developed in the lower Eastern fields during the past week. Except in the Oriskany gas field in Kanawha County, West Virginia, operations were routine and consisted of 3 dry holes, 21 gas wells and 5 producers with an initial daily production of 55 bbls.

Southeast Ohio was void of new production and only one operation was reported. In Athens County, the Kachelmacher estate drilled a second test on the C. H. Franks farm in the SE section 10, York Township, through the Berea sand to 945 feet and it was dry.

SOUTHWEST PENNSYLVANIA

Completions in Southwest Pennsylvania consisted of two small producers and eight gas wells. In Penn Township, Allegheny County, South Penn Oil Co. No. 3 James Ryan is a 3-bbl. well in the Hundred Foot sand at 1,932 feet. In Ross Township, Koenig and others second test on the M. Koenig farm is a 2-bbl. well in the Hundred Foot sand.

In Ross Township, Allegheny County, Alex Wally No. 3 Ward is a small gas well. O. Miller No. 2 Werner is a gas well.

In Washington County, Carnegie Natural Gas Co. on the H. H. Schussler farm in Peters Township, completed a 212,000-foot gasser at 1,114 feet, First Salt sand. In South Franklin Township, South Penn Oil Co. lost the tools at 2,864 feet in No. 3 Piedmont Coal Co. with the Fourth sand topped at 2,850 feet, and 250,000 feet of gas being produced from 2,851 feet.

In Greene County, Equitable Gas Co. deepened the D. M. Thorp test in Center Township to 3,538 feet. Fifty Foot sand was at 3,007-70 feet with 163,000 feet of gas at 3,028-40 feet. In Whiteley Township, Peoples Natural Gas Co. deepened No. 1 Orndoff to 3,400 feet with the Bayard sand at 3,318-32 feet and 160,000 feet of gas at 3,225 feet.

In Richhill Township, Greene County, Natural Gas Co. of West Virginia completed No. 2 D. G. Rush at 3,119 feet. The Gordon Stray sand was topped at 2,991-3,010 feet with oil showing at 2,997-3,008 feet which rose 400 feet in the casing in 24 hours.

In Center Township, Greene County, South Penn Oil Co. is down 1,418 feet in No. 12 Samuel Harvey. Carnegie Natural Gas Co. has reached 1,320 feet in No. 3 J. H. Orndoff. In Richhill Township, O. I. Dille is starting to drill No. 1 Jacob Livingood. In Dunkard Township, Convex Glass Co. is drilling at 3,240 feet on the Van Voorhis farm. In Washington Township, Equitable Gas Co. No. 2 Sadie A. Connor is rigged up. In Whitely Township, Equitable Gas Co. is deepening the Smith Fuller test with the Fifty Foot sand at 2,536-2,610 feet and 134,000 feet of gas at 2,538-44 feet.

Allegheny County

In Indiana Township, Allegheny County, Rodgers Development Co. is drilling at 2,125 feet in No. 6 J. H. Johnston. In Harmar Township, same company has the rig up for No. 3 Grace W. Wolf.

In Ross Township, Heck and others have a rig up on the Wattensoldos lease. Mendell and others are drilling at 1,200 feet on the Mendell farm. O. Miller is down 300 feet in No. 3 Werner.

In Robinson Township, Getty & Purdy are drilling at 1,500 feet on the R. Bennett farm. In Plum Township, Hope Natural Gas Co. is deepening No. 4 C. G. Mallisie, and drilling at 3,520 feet. In Hanover Township, Beaver County, Braden & Herron are drilling below 900 feet on the W. N. Bell farm.

Washington County

In Somerset Township, Washington County, Victor D. Behm is drilling at 1,825 feet on the J. D. Amos test, with Big Injun sand at 1,563-1,815 feet which had 184,000 feet of gas that blew down. Furman Nuss and others are drilling on the R. C. Garber farm, same township. Wherry Polonis and others are down 1,310 feet on the Joseph Polonis farm.

In Morris Township, Duquesne Gas Co. is drilling at 1,090 feet in the J. E. Day test. In South Franklin Township, Dunn Mar Oil & Gas Co. has rig up for the Baldwin-Gunn test.

Deep Tests

On Chestnut Ridge, in South Union Township, Fayette County, Potter Development Co., William E. Snee and others No. 2 Summit Hotel was down 6,340 feet. Tully lime proved hard and drilling was retarded. The tools are now in the Marcellus, and should reach the Onondaga this week.

In North Union Township, about 1,100 feet north of the No. 1 Summit, Wasson & Co. were drilling at 180 feet on the J. H. Sorg farm. The Greensboro Gas Co. is drilling at 425 feet on the J. R. Thompson farm.

In Mount Pleasant Township, Washington County, Norwood P. Johnston and others were drilling at 6,977 feet on the James McBurney farm. Since passing through the Oriskany sand a small volume of gas has been found.

WEST VIRGINIA

In Henry district, Clay County, West Virginia, Virginian Gasoline & Oil Corp. completed No. 44 Brown, Swan & Goshorn in Injun sand at 1,918 feet and is showing for 25 bbls. a day after the shot.

In Harts Creek district, Lincoln County, Sand Creek Gas Co. No. 4 Phillip Hager completed at 1,500 feet is good for 10 bbls. a day. No. 3 by the same company was drilled to 3,977 feet and is void of production.

In Ritchie County, W. D. Gribble test, William A. Strickler heirs farm in Clay district, at 1,830 feet, in Injun sand, is showing for 15 bbls. a day.

Gas Wells

In Braxton County, Pittsburgh & West Virginia Gas Co. completed No. 7629 G. B. Howell in Birch district at 1,849 feet. The Salt sand was at 1,830 feet with 250,000 feet of gas at 1,837-40 feet. It was not shot.

In Cabell County, Swann Gas Co., on the James Mills heirs farm, in McComas district, completed a gas well at 3,338 feet. Brown shale at 2,975-3,330 feet yielded 450,000 feet of gas initially after shot. In this district, Walden Gas Co. completed a gas well on the E. J. Nicolls farm at 3,035 feet. Brown shale lay at 2,666-3,005 feet. The well made 106,000 feet of gas per day after shot.

In Guyandotte district, Cabell County, National Gas Co. test on the R. Taylor Morris farm, had Brown shale at 2,562-2,720 feet, which produced 212,000 feet of gas after the shot.

In Calhoun County, O. E. Garrett and others, on the Wilson and Fogel lease in Sherman district, completed in Injun sand at 1,887 feet, gauged 745,000 feet a day.

In Gilmer County, Pittsburgh & West Virginia Gas Co. No. 7648, E. W. Floyd farm, Glenville district, was completed at 1,814 feet, gauging 53,000 feet a day without a shot. In Center district, a late report makes the Null & Moorhead test on the Arthur Deevers farm good for 125,000 feet of gas at 1,850 feet, the Injun sand.

In Roane County, H. D. Bland and others drilled a failure on the Levi Moore heirs farm in Walton district. Salt sand was topped at 1,710 feet and water intruded at 1,740 feet, total depth 1,747 feet.

In Wayne County, Mountaineer Gas Co. completed a test on the Sigman and L. Adkins farm in Union district as a gas well at 3,337 feet; Brown shale 2,735-3,308 feet, with 240,000 feet of gas at 3,100-3,267 feet.

Oriskany Gas Field

In the Campbells Creek pool in Malden district, Kanawha County, Owens-Illinois Glass Co. completed No. 12 L. A. Myers and others as a gas well in Oriskany sand at 5,330 feet. The Corniferous lime was at 5,212 feet. Final gauge was only 496,000 feet a day.

In Poca district, good news comes from the test of the Linden Drilling Co. on the John B. Kidd heirs farm near the Jackson-Kanawha County lines, about 3½ miles northeast of Sissonville. After the shot, the well gauged 5,651,000 feet a day, which assures drilling up to that line.

In Poca district, No. 4781 of the United Fuel Gas Co. on the Virgil C. Tate farm was completed after a fishing job at 4,860 feet. It gauged an initial production of 5,579,000 feet. In Union district, this company's test on the J. A. McCormick farm (No. 4770) is a gas well with the Oriskany topped at 4,730 feet; it gauges 3,500,000 feet a day.

In Poca district, Kanawha County, Everett Starcher is completing the test on the W. M. Drake farm as a gas well. The Oriskany was topped at 5,212 feet and at 5,240 feet it is showing 143,000 feet a day without a shot.

In the same district, Everett Starcher, on the Charles Burdette heirs land, is drilling at 4,911 feet with the well showing 7,713,000 feet of gas per day. The top of the Oriskany sand was at 4,898 feet.

The most important test now drilling is that of Joe Rubin on the Lawrence Smith heirs farm, northwest of Sissonvillle. Casing has been run to 4,826 feet with the top of the Corniferous lime at 4,811 feet and drilling resumed.

The Spartan Gas Co. topped the Corniferous lime at 4,720 feet in the test on the Ernest Fisher and others lease in Poca district. The final gauge on the West Virginia Gas Corp. test on the Ellen Good and others farm in Union district was 3,060,000 feet a day.

Deep Tests

In Clay County, the Pittsburgh & West Virginia Gas Co. ran a Halliburton line and corrected the top of the Corniferous lime to 6,122 feet in the test on the Jesse Chapman farm in Otter district. The casing was cemented in and water is now being bailed from the hole preparatory to drilling through the lime to the Oriskany. Other deep tests made little or no progress.

Other Operations

Among the new work listed, Hamilton Gas Co. No. 5 Kenney Hawkins estate, in Hamilton district, Nicholas County. The surface elevation is 2,394.65 feet. In Jefferson district, the same county, Hope Gas Co. is drilling at 632 feet in No. 7805 Thompson Land & Coal Co.

In Clay County, the Glico Oil & Gas Co. is down 1,480 feet on the Elliott Splint Coal Co. land in Henry district. Hope Gas Co. is drilling at 1,474 feet in No. 7796 H. B. Davenport, same district.

In Doddridge County, the Henderson Oil Co. is drilling at 1,400 feet on the Alexander Liggett farm in Central district. W. H. Ahner has rig up on the M. J. Cunningham farm in the same district, and on Clay Lick Run.

In Calhoun County, O. D. Jones has the material in for No. 3 H. H. Bennington in Washington district. In Sherman district, O. E. Garrett and others made a location on the S. H. Wilson farm.

In Lewis County, Hope Natural Gas Co. is drilling at 1,520 feet on the Amanda Summers farm in Skin Creek district. In Union district, Barbour County,

(Continued on Page 90)

Kansas Developments

By
DAL DALRYMPLE

Oil Area Opened Near South Gurney Pool, Russell County

A producing area about three-fourths mile southwest of the South Gurney pool, Russell County, Kansas, was uncovered at Coralena Oil Co. No. 1 Michel, NW NE NW section 2-15-14w. It made potential of 1,367 bbls. of oil daily from Lansing-Kansas City lime, topped at 2,953 feet, with pay at 2,973 feet. The hole was bottomed at 3,067 feet. Completion of this well as a producer forces the drilling of a west offset on Signal Oil Co. property, a north offset on Cities Service Oil Co. property, and a diagonal northwest offset on a Stanolind Oil & Gas Co. lease.

Monthly allowable for 61 gas wells in the Burrton field, Reno and Harvey counties, was set at 923,367,000 feet by the corporation commission. The allowable was based on an estimated market demand of 923,393,000 feet. The commission held that gas from combination wells unable to market gas through pipe lines usually is taken by gasoline-plant pipe lines, necessarily being restricted by the commission's order to a maximum of 5,000 feet per barrel of oil produced by each such well. This is the first time an allowable has been set for Burrton gas wells.

C. L. Price No. 1 Gemeinhardt, NE NE SE section 18-18-10w, south of the Stumps area in northwestern Rice County, was deepened to 3,398 feet and fluid rose 600 feet in the hole in two hours.

Wildcat producers were completed in Rice and Sedgwick counties.

Wildcat Completions

W. E. Witt and others No. 1 Fair, NW SE SE section 4-22-8w, in the Sterling area, southern Rice County, found Chat at 3,367 feet, total depth 3,401 feet, produced 60 bbls. of oil in four hours and made potential of 326 bbls., completed.

Skiles and others No. 1 Campbell, SE SE NE section 28-19-9w, wildcat east of the Chase area in Rice County, pumped 152 bbls. of oil in 20 hours after acidizing and was completed at 3,208 feet, total depth. Arbuckle lime was topped at 3,195 feet.

I. W. Murfin and others No. 1 Martin, SE SE NW section 18-28-1e, wildcat near the Robbins pool, Sedgwick County, topped Wilcox sand at 3,489 feet, total depth 3,491 feet, and pumped 24 bbls. of oil in eight hours. It pumped down and was completed as a minimum 15-bbl. well.

I. W. Segal No. 1 Temple, SW cor. section 31-32-12, Chautauqua County wildcat, was abandoned at 400 feet.

Harrison No. 1 Brown, NE SE NE section 19-34-10, wildcat in Chautauqua County, was abandoned at 820 feet.

Herndon Drilling Co. No. 1 Froning, NW cor. section 15-18-8w, Rice County wildcat, had Arbuckle lime at 3,375 feet and was dry and abandoned at 3,405 feet, total depth.

Torry & Feaster and others No. 1 Heggy, NE NE SW section 6-23-11w, Stafford County wildcat, and a hole full of water in Arbuckle lime at 3,881-88 feet, total depth, and was abandoned.

J. C. Shaffer and others No. 1 Newell, NE NE SE section 20-24-11w, wildcat in Stafford County, was dry and abandoned in Arbuckle lime at 4,065-85 feet, total depth.

Russell County

Continental Oil Co. No. 1 Rein, SW SW NW section 27-14-13w, had Kansas City lime at 2,866 feet, total depth 2,917 feet, was acidized and made potential of 1,688 bbls. of oil.

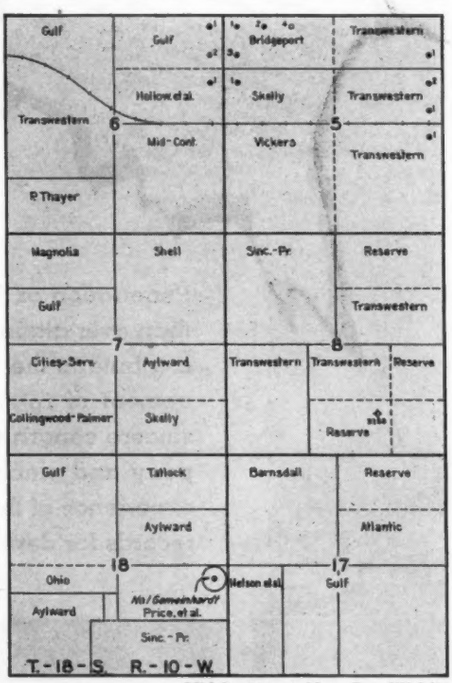
Gulf Oil Corp. No. 1 Community, SE cor. section 27-15-12w, had Arbuckle lime at 3,348 feet and was dry and abandoned, at 3,371 feet, total depth.

Transwestern Oil Co. No. 4 Polcyn, SW SW NE section 10-14-15w, topped Gorham sand at 3,275 feet, total depth 3,276½ feet, and made potential of 1,248 bbls. of oil.

Darby Petroleum Corp. No. 3 Dumler C, SE SW NE section 11-14-15w, was acidized and made potential of 974 bbls. of oil from Kansas City lime topped at 3,051 feet, total depth 3,096 feet.

Coralena Oil Co. No. 2 Sellens, SE SW SE section 19-15-13w, found Arbuckle lime at 3,265 feet and was bottomed at 3,274 feet. After acid treatment, it produced 164 bbls. of oil in four hours and made potential of 788 bbls.

Coralena Oil Co. No. 1 Michaels, NW NE NW section 2-15-14w, had Kansas City lime at 2,930 feet, Arbuckle lime 3,190 feet, with bottom of hole at 3,202 feet. It was plugged back to 3,064 feet, casing was



Mid-Continent Map Co., Wichita

C. L. Price No. 1 Gemeinhardt, section 18-18-10w, opened a new producing area south of the Stumps pool, Rice County

perforated at 2,956-76 feet and after acidizing it produced 239 bbls. of oil in four hours, making potential of 1,367 bbls.

Operations reported in Russell County for the first time: Coralena Oil Co. No. 8 Deines, NW NE NE section 36-15-14w, rigging up rotary; Carter Oil Co. No. 1 Josephine, SE cor. section 7-15-13w, old total depth 2,980 feet, to deepen; Shell Petroleum Corp. No. 1 Schmidt, NE NE SW section 15-14-15w, rig; Transwestern Oil Co. No. 3 Cramm, SE NW SE section 11-14-15w, rig; Phillips Petroleum Co. No. 1 Brandenburg, NW NW NE section 30-14-14w, rigging up rotary; Cities Service Oil Co. No. 1 Ehrlich B, NE NE NW section 30-14-14w, location; Gulf Oil Corp. No. 1 Reinhardt, SW SW SE section 19-14-14w, location; Cities Service Oil Co. No. 1 Graham, SW SW NW section 28-14-13w, moving in material; Continental Oil Co. No. 1 Rein A, NW NW SW section 27-14-13w, rig; H. Gussman and others No. 1 well, NW NW NE section 22-14-15w, location.

Barton County

Gulf Oil Corp. No. 2 Spanier, SW NW NW section 12-20-11w, Barton County, was bottomed at 3,304 feet, and swabbed 135 bbls. of oil in six hours. After acid treatment, it made potential of 798 bbls. of oil.

Stanolind Oil & Gas Co. No. 9 Panning, C E half E half NE section 10-20-11w, was dry and abandoned at 3,410 feet, total depth.

Tom Palmer No. 1 Casey, SW SW NE section 4-16-12w, had Arbuckle lime at 3,322-26 feet, total depth, was acidized and made potential of 1,874 bbls. of oil.

Phillips Petroleum Co. No. 2 Krautwurst, NE NW SW section 11-17-11w, was dry and abandoned at 3,364 feet, total depth.

Cities Service Oil Co. No. 1 Bitter E, NW NW NE section 17-16-13w, topped Arbuckle lime at 3,395 feet, was bottomed at 3,398 feet, acidized and made potential of 1,962 bbls. of oil.

New work in Barton County: Magnolia Petroleum Co. No. 4 Roetzel, SW NW NE section 25-20-11w, set 13-inch casing at 195 feet; Crown Petroleum Co. No. 1 Schartz, SW SE NW section 7-30-11w, rig; C. L. price No. 1 Wondra, NW NW NE section 10-17-12w, cellar; Republic Gas Co. No. 2 Bloomer B, NW cor. section 14-17-11w, rig; Gulf Oil Corp. No. 1 Stueder, NW NW SE section 10-17-11w, cellar and pits; Shell Petroleum Corp. No. 1 Sausen, SE SE NW section 13-16-14, spudded; same operator's No. 1 Margheim, NW cor. section 12-16-14w, drilling at 500 feet.

Rice County

Continental Oil Co. No. 2 Connery, NE SE SE section 36-18-8w, Geneseo district, Rice County, found Arbuckle lime at 3,236 feet, total depth 3,247 feet, was acidized and made potential of 2,411 bbls. of oil.

Atlantic Refining Co. No. 3 Hopkins B, NW NW SW section 6-21-7w, Wherry district, topped Conglomerate at 3,322 feet, total depth 3,334 feet, and flowed 1,228 bbls. of oil in 24 hours.

Ellis County

Magnolia Petroleum Co. No. 9 Johansen, SW NE SE section 22-11-17w, Ellis County, Bemis district, topped Arbuckle lime at 3,410 feet, was bottomed at 3,418 feet and made potential of 2,662 bbls. of oil.

Cities Serice Oil Co. No. 5 Hall B, SW SW NW section 26-11-17w, made potential of 2,633 bbls. of oil from Arbuckle lime found at 3,413 feet, and was completed at total depth of 3,418 feet.

New operations in Ellis County: Phil-Han Oil Co. No. 1 Richards, SW SE NW section 5-11-18w, moving in material; Champlin Refining Co. No. 2 Hadley B, NE SE SW section 29-11-17w, rig; Cities Service Oil Co. No. 8 Hall B, NW NW SW section 26-11-17w, location; Shell Petroleum Corp. No. 4 Rumsey, NE NW NW section 23-11-17w, rig; Kerlyn Oil Co. No. 5 Rumsey, NW SW SW section 23-11-17w, cellar; Central Petroleum Corp. and others No. 1 Foster, C E half SE NW section 33-11-16w, rig.

Ellsworth County

Magnolia Petroleum Co. No. 6 Andrea, NW SW SW section 7-17-10w, Ellsworth County, found Kansas City lime at 3,022 feet, total depth 3,106 feet, was acidized and made potential of 257 bbls. of oil with a showing of water.

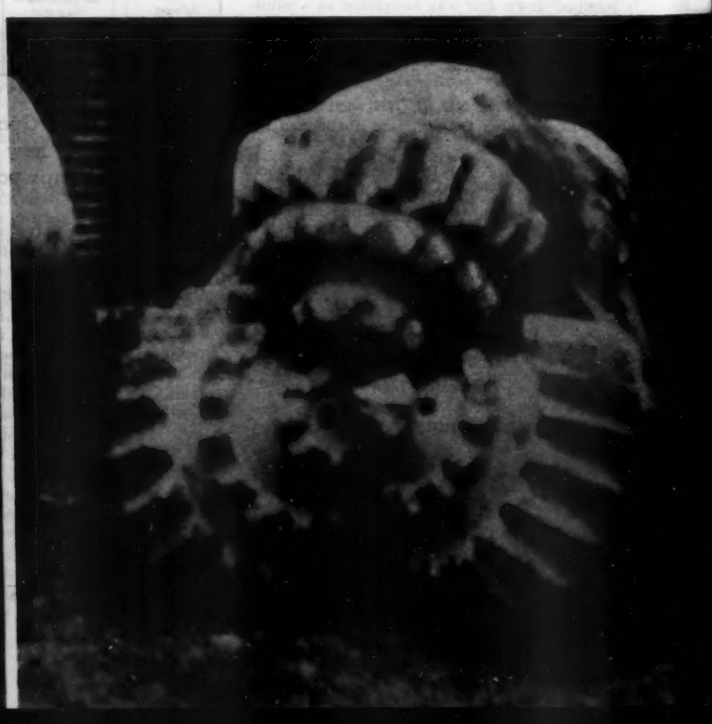
Marlyn Oil Co. and others No. 1 Stratmann, NE NW SE section 23-16-10w, topped Arbuckle lime at 3,455 feet and was dry and abandoned at 3,461 feet, total depth.

First reports of new activity in Ellsworth County: Cities Service Oil Co. No. 1 Schroeder B, SW NE NE NE section 30-17-9w, location; Gulf Oil Corp. No. 1 Schroeder, C S half N half S half SW section 20-17-

(Continued on Page 84)

Oil News
DEVELOPMENTS AND TRENDS
Drilling Operations
New King Crowned
Deep Drilling
Is Won by Continen
By WELDON HILL,
"The king is dead. Long live the king."
It was, "off with the old, and on with the new," Wednesday, as the oil industry was toasting the crowning of a new ruler in deep drilling for oil.
Gulf Oil corporation's No. 103 McElroy, holder of the title of the deepest test drilled in the world, abdicated Wednesday in favor of Continental Oil company's K. C. L.-A-2, and the title was transferred from Texas to California.
The McElroy well, in
to be prepared to drill to 13,400
Thirteen miles from the Con
nental test, Union Oil company's
No. 1-34 Kern County Land com-
pany was completed recently at a
total depth of 11,302 feet, in the
Bravo sand, and is the deepest co
mercial producer in the world.
Initial production
13,000 FT Plus

Penetration of the earth's surface to depths greater than ever attained in the history of drilling is indeed a tribute to the achievement of men and the development of rotary drilling equipment. We extend sincere congratulations to the Continental Oil Company and place credit where due—to the skill and experience of the men who have broken all existing records for depth.



...AND HUGHES ROCK BITS WERE DEPENDED UPON TO GET THE HOLE DOWN IN *Record Time*

THE FOLLOWING ROCK BITS WERE USED

Depth	HUGHES	Other Makes
		6—9⅝"
0' - 11,584'	29—9⅝" Hughes Tricones	4—9⅝"
11,584' - 12,914'	17—6" Hughes Tricones	1—6"

Now coring ahead with Hughes Hard Formation Core Heads!

HUGHES TOOL COMPANY, HOUSTON, TEXAS

9w, location; Continental Oil Co. No. 1 William Ploog A, C S half N half S half SW section 27-17-8w, location.

Stafford County

Stanolind Oil & Gas Co. No. 5 Spangenberg, NE SW SW section 29-22-11w, Stafford County, found Arbuckle lime at 3,575 feet, was bottomed at 3,593 feet and made potential of 1,792 bbls. of oil.

Same company's No. 1 Schilling, SE SE NW section 12-22-13w, had Arbuckle lime at 3,703 feet, total depth 3,716 feet, was acidized and completed as a 15-bbl. minimum well.

Atlantic Refining Co. and Phillips Petroleum Co. No. 1 Lyons, C E half E half NE section 28-24-13w, made potential of 2,039 bbls. of oil from Arbuckle lime at 4,072 feet, total depth 4,079 feet.

New work in Stafford County: Stanolind Oil & Gas Co. No. 1 Paulson, NW NW NE section 26-24-11w, location; same company's No. 2 Terris B, NE SE NW section 23-14-11w, rig; Stanolind Oil & Gas Co. No. 1 Hill, NE NE SW section 2-23-12w, rigging up rotary; Ted Hamilton No. 1 Hitz, NE NE NW section 23-22-13w, location; Stanolind Oil & Gas Co. No. 1 Hahn, NE NE NW section 14-22-13w, rig; same company's No. 1 Harms, NW NW NE section 13-22-13w, rig.

Harvey County

E. J. Shaffer and others No. 2 Dreese, SW NE NE section 2-23-2w, Halstead pool, Harvey County, flowed 911 bbls. of oil in three hours and made potential of 5,000 bbls. of oil. Total depth was 2,992 feet.

T. P. Henry and others No. 1 Bevine, NW SW NE section 30-23-3w, Burrton district, was bottomed at 3,356 feet, acidized and made potential of 753 bbls. of oil.

McPherson County

Continental Oil Co. No. 1 Meyer, NE NE SE section 19-21-1w, McPherson County, had Simpson sand at 3,481 feet, total depth 3,490 feet, and was dry and abandoned.

Continental Oil Co. and others No. 7 Huxman, C W half E half NW section 29-21-1w, was a location. Same company's No. 11 Hetzke, SW SE NE section 29-21-1w, was a location.

Reno County

Cities Service Oil Co. and others No. 1 Haury A,

(Continued on Page 106)

Michigan Field Report

By
O. C. PRESSPRICH

Edenville's Discovery Well Doubles Initial Production

SAGINAW, Mich., Feb. 14. — Three developments stand out in a review of the Michigan oil and gas industry for the past week: These are the doubling of the Edenville (16n-1w) discovery well's production, to 1,000 bbls. a day, through deepening to a point 5 feet in the Dundee limestone; a major westerly extension of the south Buckeye (18n-1w) pool in Gladwin County and a 14,000,000-foot gas strike in an oil test in Grant Township (17n-4w), Clare County.

So confident are Michigan oil operators of the future of the Edenville area as an oil producer that perhaps a dozen leaseholders, including Sun Oil Co. and Mammoth Producing & Refining Co., already have staked locations and begun setting up rigs for drilling, and Simrall Pipe Line Corp. has announced plans for immediate construction of a pipe line to carry the district's crude to its Greendale-Mount Pleasant line and there with Simrall's Michigan-Ohio pipe line, which has its terminus at Toledo.

The Buckeye field extension was made by Marshall Bauman in his No. 1 Hostetler, NE NE NE section 27-18n-1w, which came in at 500 bbls. a day, natural flow, and increased to 1,200 bbls. a day after it was acidized. This well, best thus far in the south Buckeye area, opens at least 40 new locations in sections 27 and 22, and there has been a run by other operators to put down offsets.

The Clare County gasser, biggest Michigan gas well in many months, is Gulf Refining Co. No. 1 Citizens State Bank and William Klingerer, in the NW NW NW of section 36-17n-4w. Originally an oil test, it found gas at 1,263 feet, in the Marshall sand, showing a gauge of 1,600,000 feet daily. The next day, while preparations were being made to pinch off the gas and continue deeper for oil, the well blew in with a production of 6,000,000 feet, then on Friday night, burst its control and stepped production up to 14,000,000 feet. Now operators and landowners are debating over the advisability of calling it a gas well at present levels or blocking off the gas and going deeper for oil. The problem is complicated by the fact that the well is within a mile of Gas Corporation of Michigan's Clare-Mount Pleasant transmission line, which serves both Mount Pleasant and Clare, which this winter have been threatened with a gas shortage.

Oil and gas men are considering, also, the possibility that the well might be the forerunner of a profitable gas field.

Other gas developments of the week include a 5,000,000-foot well near Edmore, Montcalm County, and a gas strike near Stanton, Montcalm County, by Smith Petroleum Co. No gauge has yet been made of the Smith well's flow.

Edenville Takes Spotlight

Chief interest here centers around the Edenville development, touched off by Chapman Oil Co.'s discovery well. This well lies about 10 miles southeast of the proved Buckeye-Bentley structure in Gladwin County, and about 15 miles northeast of the Mount Pleasant-Porter structure. Its discovery is said to provide a fairly accurate gauge of the geology of the district, a fact which operators assert should expedite development of the area.

The Dundee stratum in the Edenville region is believed to be free from water for a depth of 80 to 100 feet. The gas pressure in the Chapman well is high in comparison with that in the Buckeye area, and more comparable with the pressure in Greendale and Porter. The oil closely resembles the Greendale grade, samples testing 41.3 degrees at 60° F. McClanahan-Leonard Pipe Line Co., which ran 3,000 feet of line to service the well, has a posted price of $1.12 for the Edenville crude, identical with that now paid by all carriers for Greendale and Porter grades.

North Buckeye (Wicklund) pool development was at a standstill, all drilling activity being centered on the lower Buckeye field. No completions were reported in the north field and only three tests entered production in the south (Oard) pool, including the Bauman-Hostetler test. One test of Mammoth Producing & Refining Corp., its No. 1 Oard, SW SW NE section 25-18n-1w, drilled as a deep test in the Monroe, was scheduled for abandonment, when further water was encountered. The test hoped to tap a paying pool of oil which operators and geologists believe lies in a deeper stratum than the Dundee. Rex Oil & Gas Co. No. 1 Gray, NW NW NW section 25-18n-1w, gauged a production of 130 bbls. natural flow. Rowmor corporation's No. 1 Foster, NE SE NW section 26-18n-1w, third producer of the week, was a 120-bbl. natural producer.

In Gladwin County, another setback was recorded for Bentley Township's prospective field when Dibble Bros. No. 1 Delbridge, NW NW NE section 1-17n-2e, found the Dundee dry and was abandoned. The test was an attempt to prospect the extreme northwest part of the Bentley area, and sets up a boundary marker on production. Most of the 12 active locations in the Bentley district are in the central and south central part of the township.

In Arenac County, McClanahan Oil Co. No. A-3 Seignious, SW SW SE section 3-20n-4e, Clayton Township, failed to hit production in the Dundee and was due for abandonment.

In Ogemaw County, Muskegon Development Co. No. 3 Garnett, NW SE NW section 28-22n-2e, West Branch Township, was acidized and gauged at 150 bbls. daily.

Midland County

In Jasper Township, Midland County, Pure Oil Co. No. 8-B Coring Estate, C S half NE SW section 12-13n-2w, was completed for 1,100 bbls. per day after a 1,000-gallon acid treatment, and the same company's No. 4-B Bond, C N half SE SE section 12-13n-2w, was scheduled for completion.

Montcalm County

A wildcat gas test in Home Township, Montcalm County, about 4 miles from the Six Lakes field added 5,000,000 feet to gas production this week. It was Socony-Vacuum Oil Co. No. 1 Hansen, C N half NE NE section 22-12n-6w, which found production in the Michigan Stray sand.

Ottawa County

In Zeeland Township, Ottawa County, commercial production prospects appeared in Zeeland Township, northwest of the Allegan-Salem field, when Morris-Sutherland Drilling Co. No. 1 Brandt, NW NE NE section 36-5n-14w, flowed 55 bbls. after acid. It was a Traverse well and logged bottom at 1,710 feet. Five tests in the Salem field were nearing pay sand this week-end.

Isabella County

In Sherman Township, Isabella County, Michigan Cities Natural Gas Co. No. 1 Baker-Cornell, C NW section 33-15n-6w, was completed for 1,000,000 feet of gas per day and was turned over immediately to the Public Utilities Corp. Pipe Line to service Mount Pleasant. The same company was completing its No. 1 Rhode, C S half S half section 11-14n-6w, Broomfield Township, in the Marshall. Pure Oil Co. No. 8-B McClintic, SW SW SW section 33-15n-6w, was completed as an oil well, with a gauge of 420 bbls. a day, after acid.

Production by Pool

Michigan's January crude production clung close to the same level as December's, being within 70 bbls. a day of the previous month's record. The Oil & Gas Association of Michigan report of runs:

	Wells	Daily runs
Porter-Yost	424	8,104
Greendale-Chippewa	262	1,600
Geneva-Midland	3	26
Vernon-Leaton-Denver	94	1,592
Sherman-Isabella	54	4,928
Crystal-Montcalm	82	896
Beaverton	23	252
Bentley-Gladwin	4	238
Buckeye-Gladwin	347	26,628
Secord-Gladwin	1	14
Ogemaw	213	2,709
Adams-Arenac	7	134
Clayton-Arenac	39	308
Saginaw	57	42
Birch Run-Saginaw	25	67
Dundee-Monroe	3	24
Salem-Allegan	56	3,596
Muskegon	91	80
Totals	1,785	51,319

Texas and Louisiana Gulf

By
NEIL WILLIAMS

Galveston Bay Pool Opened; Extension to Villa Platte, La.

HOUSTON, Tex., Feb. 14.—The first oil field in the coastal waters of Texas was opened Saturday morning by Standard Oil Co. of Texas and Salt Dome Oil Corp. No. 1 State, in Galveston Bay, about a mile offshore from Chambers County. Bottomed in the Frio formation at 6,030 feet, with 7-inch casing cemented at 5,955 feet, the well was washed in at 7:30 a.m. and after it had cleaned itself of wash water and drilling mud, and connected to tanks, flowed at the rate of 22 bbls. of pipe line oil per hour through a quarter-inch choke, with tubing pressure 960 pounds. The casing was sealed off. The gas-oil ratio is 600 to 1. The gravity of the oil was estimated from 32 to 33 degrees.

This structure was found by the use of torsion balance work and not by reflection seismograph shooting as reported last week. On the strength of the torsion balance survey several thousand acres were leased, and the original shooting picture was checked with reflection seismograph. From all indications the structure will extend over a wide area and an immediate drilling campaign is expected. Humble Oil & Refining Co. was granted permits for three wells by the War Department and these will be drilled on tracts No. 91, 96 and 95. Tract No. 95 offsets the discovery to the north, while tracts No. 91 and 96 are northwest and east, respectively.

Pierce Estate No. 1 fee, I.&G.N. Survey, a wildcat in the McCrosky area, northwest of the Van Vleck field, northern Matagorda County, made its appearance as a possible pool opener and casing is being cemented for a production test. In a core from 6,601-24 feet, a 23-foot section was recovered of which 19 feet was shale, and the last 4 feet sand, with streaks of shale, showing oil. On a 10-minute drillstem test at 6,617-24 feet through a quarter-inch choke, 200 feet of oil-cut mud (50 per cent oil) and 275 feet of drilling mud was recovered. After the casing is cemented an additional core is expected to be taken before the well is tested. The hole is bottomed in the Marginulina formation.

Approximately 4,500 feet southwest of the above well, the same company is moving in material for No. 1 Paul Kruger, C. Warren Survey, a farm-out from the Skelly Oil Co.

Prospects of opening a 2-mile southeast extension to the Dickinson field, Galveston County, were dimmed when Humble Oil & Refining Co. abandoned No. 1 Peters. The hole was drilled to a total depth of 9,355 feet, and plugged back and tested through perforated casing at 8,057-67 feet and 8,222-43 feet. Salt water was recovered on each attempt.

The potentiality of the newly opened Cheek area, Jefferson County, remains in doubt as Glenn H. McCarthy No. 1 Broussard continues to produce brackish water. On a potential test through perforated casing at 7,718-27 feet, the well flowed 105 bbls. of oil and 18 bbls. of brackish water through a 9/64-inch choke, with tubing pressure 2,250 pounds and casing pressure 2,700 pounds. Gravity of the oil tested 40 degrees. In the same county and located in the Nome field, Humble Oil & Refining Co. has derrick up for a core test, being located on the B. H. Willis lease in the John Vanness Survey.

Jack Frazier No. 1 McMurty, reported last week as a doubtful producer for the Hardin field due to meager showing in the discovery horizon, flowed several hundred feet of oil on a drillstem test at a plugged back depth of 7,605-17 feet and will no doubt be completed as an average producer. The hole was drilled to 7,794 feet. L. W. Wickes extended the field to the north with the completion of No. 1 Tullos, and the rig is being moved to No. 2 Tullos.

Humble Oil & Refining Co. No. 1 Pierce, 1 mile north of production of the Friendswood field, southern Harris County, was completed flowing 26 bbls. per hour through a quarter-inch choke, with tubing pressure 800 pounds and casing pressure 900 pounds. Production was obtained by perforating the liner at 6,034-44 feet. Four other completions were made by the company on the Durwood, Etta Gibson, N. J. Kildahl and J. L. Jones leases.

In the Palacios field, Matagorda County, the testing of Atlantic Refining Co. No. 3 Foley was attracting much attention. A broken section of sand and shale, showing oil and gas, was logged at 8,500-8,635 feet, total depth, and 7-inch casing is being cemented.

A slight west extension was recorded for the Spurger field, Tyler County, with the completion of Republic Production Co. and Houston Oil Co. No. 7 Hurd. Oil sand was logged at 7,695-7,710 feet, total depth, and the well flowed 631 bbls. per day through a quarter-inch choke. Location was made for No. 8 Hurd, 5,575 feet north of the south line and 12,223 feet east of the west line of the N. Hurd Survey.

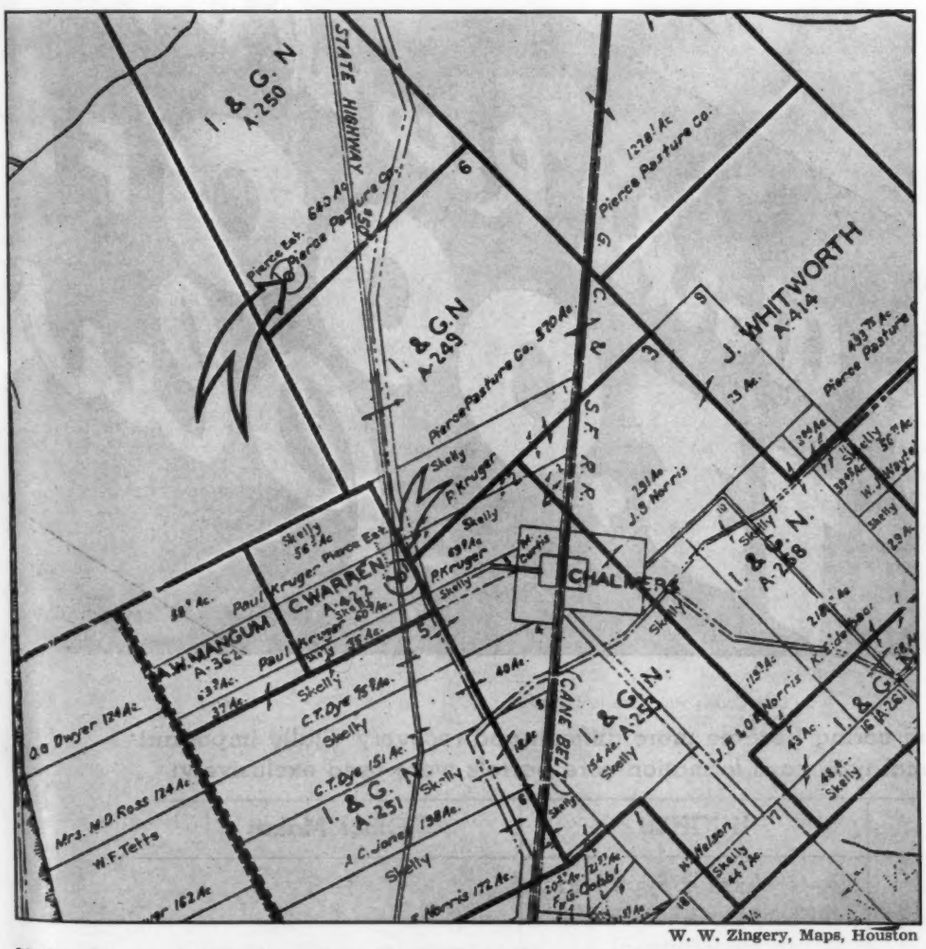
Continental Extends Villa Platte

The outstanding development along the Louisiana Coast was the completion of Continental Oil Co. No. 1 Louisiana Central Land & Improvement Co., approximately a mile southwest of the discovery well of the Villa Platte field, Evangeline Parish. Sand showing oil was topped at 9,015 feet and the hole was cored to a total depth of 9,085 feet. Seven-inch casing with a 20-foot slotted section on bottom, was cemented at 9,040 feet, and the well flowed 430 bbls. of 41-gravity oil in 24 hours through a three-sixteenths inch choke with tubing pressure 1,600 pounds and casing pressure 1,700 pounds. Based on top of the sand, the well is 60 feet lower than the discovery well.

This is the second completion on this structure which was opened in 1937. It is the first production to be developed from the Sparta member of the Cook Mountain formation in Coastal Louisiana and the performance of the two wells indicate a structure of major importance. It encourages additional drilling along the Conroe trend especially the area eastward from the Spurger field in Tyler County which is producing from the same formation, a distance of approximately 125 miles.

The company is drilling below 5,000 feet on No. 1 Hirsch, another outpost test, while locations have been made for No. 1 Pieire McDaniels and No. 1 Mrs.

(Continued on Page 106)



W. W. Zingery, Maps, Houston

McCrosky area, Matagorda County, showing location of Pierce Estate No. 1 fee which is preparing for a production test after making a favorable showing on a drillstem test in the Marginulina formation

ANOTHER World Record Depth
13,000 FT. Plus

Wire Line Coring was used to 11,584 ft.

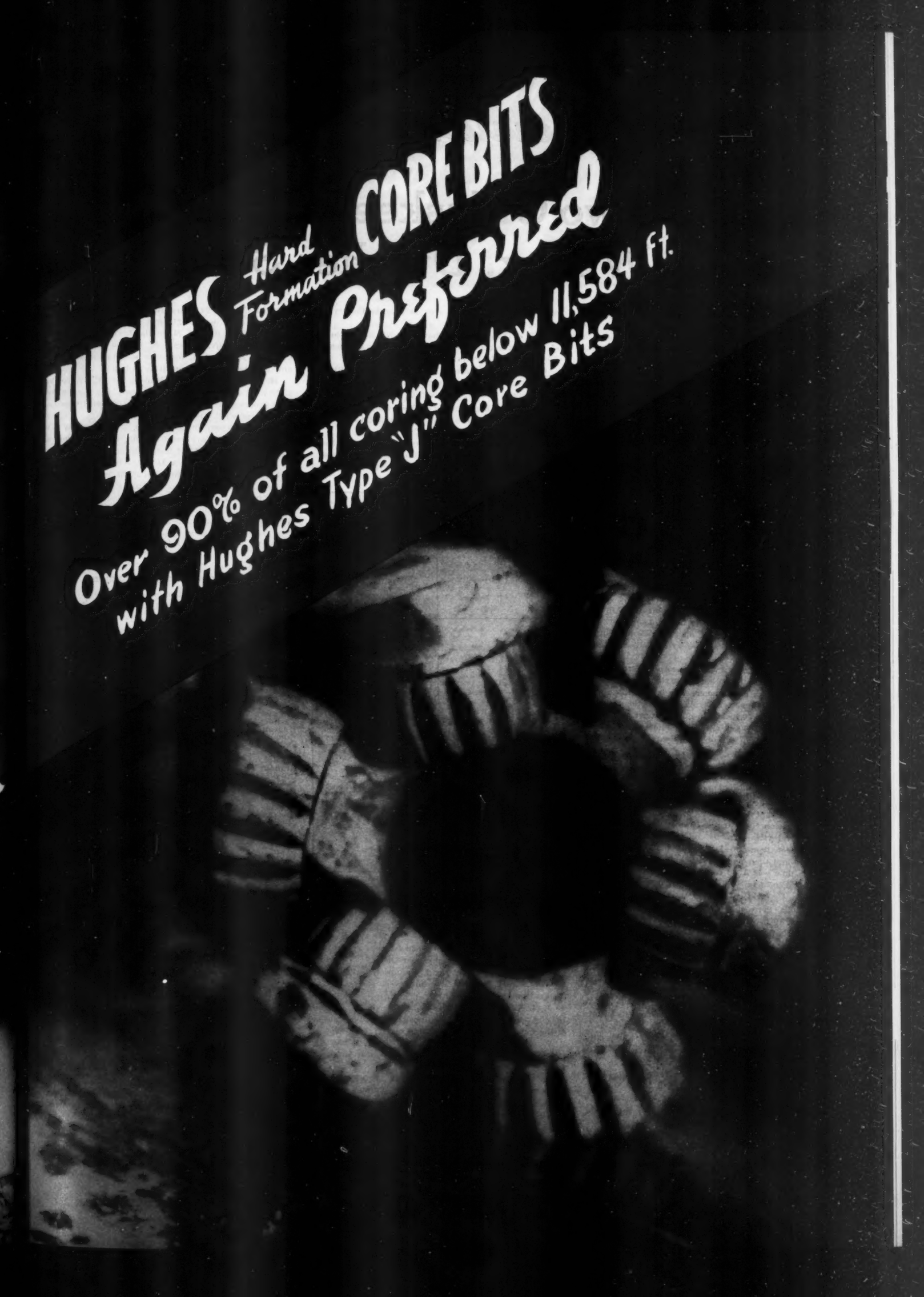
At extreme depths when coring became more difficult and recovery vitally important, the following conventional type hard formation core barrels were used exclusively:

Depth	HUGHES	Other Makes
From 11,584′ to 12,914′	30—6″ Hughes Type J hard formation cutter heads. Core Recovery 81.3% **STILL CORING AHEAD!**	3—6″ Core Recovery 65.6%

HUGHES TOOL COMPANY : HOUSTON, TEXAS

HUGHES Hard Formation CORE BITS Again Preferred

Over 90% of all coring below 11,584 ft. with Hughes Type "J" Core Bits



Oklahoma Operations

By DAL DALRYMPLE

Two Okfuskee Wildcats Open Wilcox, Dutcher Sand Areas

The Cement and Ramsey pools held attention in Oklahoma at the week-end, with a pair of new producers recorded in the Caddo County field and three wells nearing the pay zone in the Payne County area.

On the east side of the Cement field in Caddo County, Ray Stephens, Inc., No. 2 Funk, SE SW SE section 1-5n-9w, was flowing around 700 to 800 bbls. of oil daily while operators continued testing. It was bottomed at 5,354 feet, with pipe set at 5,240 feet.

A big gasser was near completion on the west side of the field at Magnolia Petroleum Co. No. 10 Niles, SW SW NW section 36-6-10w. It was shut in without gauging, but estimates of production exceeded 100,000,000 feet of gas daily. Total depth was 4,450 feet. Lease and royalty play in the Cement district continues briskly, and field activity was extended the past week with staking of location for a test across the line in Grady County.

Three tests offsetting the discovery well in the Ramsey pool, Payne County, were nearing pay horizons. Mid-Continent Petroleum Corp. and others No. 1 Columbia Wetzel, NW NW SW section 18-18-2e, was drilling below 4,588 feet, and same operators' No. 1 Brandon, SE SE NE section 13-18-1e, was drilling below 4,512 feet. The operators' No. 1 Carl Wetzel, NE NE SE section 13-18-1e, southwest diagonal offset of the discovery well, was making hole below 3,895 feet. Production in the discovery well, operators' No. 1 Ramsey, SW SW NW section 18-18-2e, was from Wilcox sand at 4,768-96 feet.

One Okfuskee County wildcat was completed to open a producing area, and another in the same general sector was showing as a pool opener. The latter is Broswood Oil Co. No. 1 Lehmer, NW SW NW section 21-13-10, near the town of Okfuskee in northeastern part of the county. It had 1,800 feet of oil in the hole from Dutcher sand at 2,850-54 feet, and operators were erecting tankage prior to testing.

Wildcat Operations

A Wilcox sand producing area was opened near the town of Okfuskee, in northeastern Okfuskee County, at Mid-Continent Petroleum Corp. No. 1 Ireland, SW NE SW section 10-13-10, the first of the two strikes in that general vicinity to be completed. After a shot at 3,420-28 feet, it swabbed 125 bbls. of 39-gravity oil in 24 hours and then pumped 107 bbls. in 12 hours. Top of Viola lime was 3,380 feet, Simpson Dense 3,400 feet, Dolomite 3,405 feet, Wilcox sand 3,420 feet, total depth 3,431 feet.

Magnolia Petroleum Co. No. 1 Reynolds, NE NE SE section 19-25-5w, wildcat in southern Grant County, topped Viola lime at 6,055 feet, Dense 6,065 feet, Wilcox sand 6,132 feet, total depth 6,236 feet, and was dry and abandoned.

Wildcat activity increased considerably the past week, several new operations being reported. Wilcox Oil & Gas Co. No. 1 Royer, SE SE NE section 18-14-6, has erected rig and was moving in tools. It is a wildcat east of the recently revived Sac & Fox area in eastern Lincoln County.

Carter Oil Co. No. 1 Lydick, C E half NE NW section 23-15-4w, wildcat southwest of Navina in southwestern Logan County, was digging cellar and pits.

Two wildcats were reported in Texas County, Oklahoma Panhandle. Hardendorf & Kuhn No. 1 Wiggins, C NW section 1-2n-14ecm, was drilling at 200 feet. It is near the town of Guymon. Same operators' No. 2 Wiggins, C NE section 2-2n-14ecm, was a location.

Norbia Oil Co. No. 1 Osage, SE cor. section 18-25-7, was location for a wildcat southeast of the South Burbank pool in Osage County.

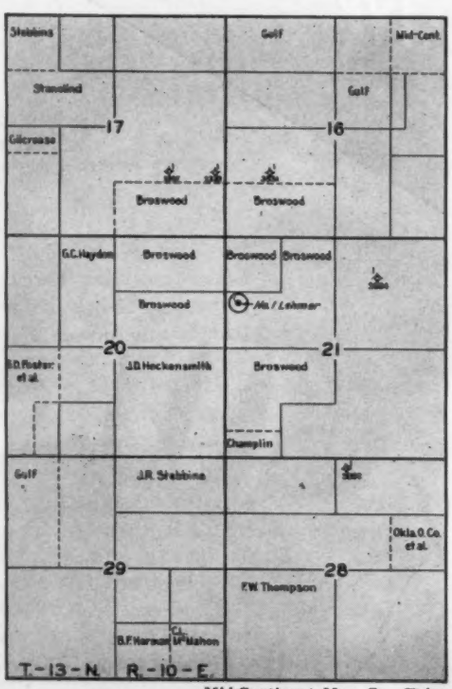
Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Freame, NW NW SE section 29-9-9, wildcat northeast of the Adams area in Hughes County, was digging cellar and pits.

Hall & O'Mara No. 1 Shaw, NE NE SE section 32-6-5, had set surface pipe. This wildcat is southeast of the Gray pool in Pottawatomie County.

C. E. Davis and others No. 1 Jones, NE NE SW section 34-6-5, 1 mile southwest of Konawa in southwestern Seminole County, was rigging up.

Drilling had been started at Cawley and others No. 1 McCormick, NW SW SW SE section 27-2n-4e, wildcat southwest of Roff in Pontotoc County.

In Stephens County, Robinson and others No. 1 Alexander, NW NE NW SE section 30-2n-4w, was shut down at 380 feet, and Henry & Schwoerke No. 1-A Sadler, SW NW NW SE section 30-2n-4w, was shut down at 580 feet. These wildcats are near Doyle.



Mid-Continent Map Co., Tulsa

Broswood Oil Co.'s wildcat in section 21-13-10, Okfuskee County, was showing as a Dutcher sand producer

Bryan Petroleum Co. No. 1 Thompson, SW NE NE section 8-15-11, wildcat in northwestern Okmulgee County, was building rig.

J. B. Nichlos No. 1 Cleveland, NW NE NE section 18-5-8w, had dug pits. This outpost is immediately east of the Cement field but in Grady County.

W. & P. Oil Co. No. 1 Worsham, NW NW NW SE section 15-4s-10w, was location for a wildcat south of Temple, in Cotton County.

H. P. Grimes and others No. 1 Hall, SW NE SW section 12-3s-19w, wildcat in southwestern Tillman County, was a location.

Dutton and others No. 1-B Peters, SW NW SE section 8-6-10, wildcat north of Calvin in Hughes County, was a machine.

Pontotoc County

Noble Drilling Co. No. 1 Thompson, C W half SW NW section 1-1n-7, Jesse area, Pontotoc County, flowed 650 bbls. of oil in 24 hours from Hunton lime topped at 3,955 feet, total depth 4,212 feet.

In the Pitts district, Magnolia Petroleum Co. No. 38 Metropolitan Life, SW SE SE section 22-2n-7, found Cromwell sand at 2,582 feet, was bottomed at 2,605 feet, anw swabbed 181 bbls. of oil in 24 hours.

H. L. Blackstock No. 3-A Hardin, SW SE NW section 30-2n-7, an old Fitts well plugged back, was recompleted after shooting Cromwell sand at 2,450-60 feet. It pumped 155 bbls. of oil in 24 hours.

Frank Newsom and others No. 3 Walker, SW NW SW section 11-4-6, northeast of Ada, was completed as a 25-bbl. pumper at 1,174 feet, total depth.

Dutton & Jones No. 1-A Abbott, NW NW NE section 14-4-6, was dry and abandoned at 1,220 feet, total depth.

New activity in Pontotoc County: F. W. Merrick No. 4 Balthrop, NE NE SE section 10-4-6, location; Continental Oil Co. No. 6 Thompson, C W half NW SW section 1-1n-7, location; same company's No. 7 Thompson, C E half SE NE section 2-1n-7, location; Gillespie & Moore No. 1 Roberts, SW NW NE section 36-5-4, moving in material.

Estimated Daily Production

Estimated daily production of Oklahoma for the week ending February 12, and for the preceding week, was as follows:

	Barrels	
	Feb. 12	Feb. 5
Allen	5,750	6,125
Billings	7,600	7,900
Burbank	7,675	7,700
South Burbank	13,400	13,500
Balance Osage	19,650	19,500
Blackwell district	5,150	5,130
Bristow-Slick	6,975	7,250
Chandler	2,350	2,325
Crescent	7,500	7,975
Cromwell	3,325	3,300
Cushing-Shamrock	10,750	10,800
Duncan district	3,900	3,850
Edmond	9,900	8,250
Fish	4,125	4,150
Fitts	64,175	69,850
Jesse	2,950	4,150
Graham	5,600	5,600
Gray	1,175	1,125
Healdton	9,425	9,400
Hewitt	4,050	4,100
Holdenville	825	850
Keokuk	7,750	7,925
Konawa	1,525	1,375
Lucien	11,500	12,900
Moore	7,100	7,475
Oklahoma City	100,000	114,025
Olympic	6,550	6,425
Polo	750	775
Sasakwa and townsite	2,725	2,250
Sholem-Alechem	3,000	2,925
Seminole County:		
Bowlegs	10,525	10,425
Carr City	4,450	4,600
Earlsboro	5,750	5,600
South Earlsboro	650	550
East Earlsboro	6,250	6,200
Little River	9,525	9,450
East Little River	1,025	1,025
Maud	725	600
Mission	1,800	1,825
Seminole	8,625	8,525
East Seminole	1,850	1,775
Searight	3,650	3,750
Total Seminole	54,825	54,325
St. Louis-Pearson	18,250	18,550
Tatums	6,850	6,900
Tonkawa-Garber-Thomas	4,400	4,450
Wewoka	2,750	2,775
Yale-Jennings	3,750	3,775
Other pools	83,150	83,450
Total Oklahoma	511,125	533,100

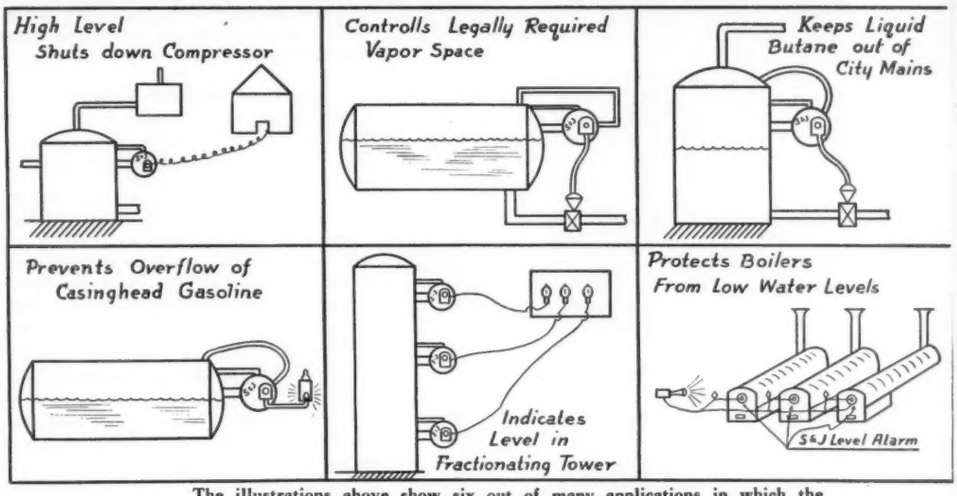
Seminole County

Earl Evans and others No. 1 Swan, SW NW SE section 33-7-6, Dora area, Seminole County, flowed 254 bbls. of oil in 24 hours after shooting at 2,845-2,925 feet. Total depth was 2,928 feet.

J. F. Smith No. 3 Norvell, NE SE NE section 32-7-6, had sand at 2,920 feet, total depth 2,970 feet, and flowed 550 bbls. of oil in 24 hours after a shot.

Francis Oil & Gas Co. and others No. 1 Lewis, NE SE SE section 32-7-6, was bottomed at 2,936 feet, plugged

S & J Announces The Refinery Watchman!



The illustrations above show six out of many applications in which the S. & J. Refinery Watchman has proven itself.

Essentially, the S. & J. Refinery Watchman is a level alarm which may be applied to any type of vessel for the purpose of giving a signal or alarm when the rise or fall of liquid within the vessel passes a predetermined high or low point.

The Refinery Watchman has but a single connection to the vessel which reduces the possibility of false tripping or signalling, due to surge or ebullition. It may be used to turn on a light, ring a bell, operate a solenoid valve or other electrical signalling device, will throw a switch, blow a whistle or start a liquid flow.

The Refinery Watchman is available in three models. Model "A" is equipped with a mercury switch enclosed in a vaporproof switch box, and is designed for 10 amperes, 110 volts; or 5 amperes, 220 volts. Model "M" is identical except that it requires manual resetting after having tripped, giving the opportunity of determining the cause of tripping. Type "V" is equipped with a pilot valve for air or gas operation on 15 to 20 pounds line pressure. It can be used to blow a whistle, or with a diaphragm operated valve for liquid flow control. Bodies are of semi-steel for pressures up to 125 pounds and of cast steel for pressures up to 300 pounds.

Above is model ST-953M which requires manual resetting after each alarm. All three models are fully described in Descriptive Leaflet 400-1. Write for a copy.

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back to 2,906 feet and set 7-inch casing at 2,852 feet. After a shot, it flowed 640 bbls. of oil in 19 hours from sand topped at 2,864 feet.

D. Malarnee No. 2 Swan, SW NE SW section 33-7-6, topped sand at 2,832 feet, total depth 2,921 feet, and plugged back to 2,916 feet. It flowed 380 bbls. of oil in 20 hours after a shot.

First reports of new activity in Seminole County: Foster Development Co. No. 2 Chornick, NE NW SW section 4-6-6, cellar; J. B. Terry and others No. 1 Scroggins, NW SW NE section 4-6-6, location; W. P. Pine No. 6 Williams, NW NW NE section 22-6-6, cellar and pits; Bryan Petroleum Co. No. 2 Walker, NW SE SE section 4-7-6, building derrick; Malarnee No. 3 Swan, SE NE SW section 33-7-6, spudded.

Pottawatomie County

Clem Davis and others No. 1 Jordan, SW SE SW section 12-7-4, St. Louis district, Pottawatomie County, found Calvin sand at 3,127 feet, total depth 3,137 feet, and flowed 82 bbls. of 44-gravity oil in 24 hours.

Alma Oil Co. No. 1 Smith, SE SE NE section 32-7-5, had rig on ground. E. W. Jones No. 2 Polk, SE NE NE section 35-7-4, was drilling at 3,175 feet. Magnolia Petroleum Co. No. 2 Billington, SW NW SW section 36-7-4, was a location; same company's No. 2 Jordan, SE SE SW section 12-7-4, was a location.

Hughes County

Champlin Refining Co. No. 1 Harjo, NW NW SW section 34-9-9, Fuhrman area, Hughes County, was abandoned when water intruded at 3,338-69 feet, total depth.

S. P. Brown and others No. 1 Hall, NW NW SE section 8-5-8, was drilling at 800 feet.

Cleveland County

Sinclair Prairie Oil Co. and others No. 1 Gross, SW SW NE section 22-10-2w, Moore area, Cleveland County, was drilled and completed as a salt water disposal well at total depth of 7,699 feet.

Osage County

Wolverine Oil Corp. No. 42 North Avant Unit, NE SW NE section 31-24-12, an old Osage County well, was deepened from 1,738 feet to 1,757 feet, and pumped 4 bbls. of oil and 6 bbls. of water in five hours, recompleted.

Branstetter No. 1 Osage, SW NW SE section 23-22-11, was a location. Lewis Production Co. No. 7 Osage, NE NW SE section 27-24-7, was building rig. Sinclair Prairie Oil Co. No. 7 Osage, NE SE NE section 21-25-6, was a location.

Pawnee County

O. H. P. Thomas No. 2 School Land, SE NW NE section 36-20-9, an old Pawnee County well, was dry and abandoned after deepening from 1,870 feet to Bartlesville sand at 2,115-32 feet, total depth.

Okfuskee County

Louis Stekoll No. 2-B Likowski, SW SE NW section 23-11-11, Okfuskee County, had sand at 1,620 feet, total depth 1,640 feet, and pumped 4 bbls. of 39-gravity oil in 24 hours.

Chapman & McFarlin No. 8 Williams, SE SW NW section 30-10-9, was drilling at 200 feet.

Creek County

March Oil Corp. No. 18 Lee, SW SW SE section 13-18-11, Creek County, topped Glen sand at 1,441 feet and was completed as an 8-bbl. pumper at 1,525 feet, total depth.

New work in Creek County: Big Four Petroleum Co. No. 1 Rector, SW NW NE section 24-19-7, drilling at 85 feet; Sinclair Prairie Oil Co. No. 5 Oates, C N half S half NE section 14-19-9, moving in machine; Johnson Oil Refining Co. No. 9 Evans, NW SW NW section 29-19-9, spudded; H. C. Detrick No. 1 Kimble Estate, NE SE NE section 10-14-10, rigging up machine; Atlantic Refining Co. No. 2 Harjo, SE SW NE section 27-14-10, location.

Lima Oil & Gas Co. No. 3 Benjamin, SW cor. section 30-15-8, an old well, was deepened from 3,202 feet to 3,221 feet, produced 6,000,000 feet of gas and was recompleted.

Carter County

Samedan Oil Co. No. 20 Higgins A, SE NE SW section 6-2s-2w, Wildcat Jim area, Carter County, produced 20,000,000 feet of gas and was completed at 2,076 feet, total depth.

Same operator's No. 18 Higgins, A, SE NE NW section 7-2s-2w, was shot at 2,445-55 feet, total depth 2,525 feet, and pumped 47 bbls. of oil in 14 hours.

Sinclair Prairie Oil Co. No. 17-A Richards, NE SW NW section 9-4s-3w, Healdton field, was bottomed at 1,123 feet, plugged back to 1,025 feet, and pumped 5 bbls. of oil daily.

W. W. Woodworth No. 3 Woodworth, NW NE NW section 20-4s-2w, Hewitt field, had a junked hole and was abandoned at 1,531 feet.

F. W. Merrick, Inc., No. 2 Mitchell, SE NW SE section 24-1s-3w, had erected derrick. Gulf Oil Corp. No. 1 Smith, C SW SW section 26-2s-3w, was rigging up tools to deepen from 7,773 feet, total depth. Carter Oil Co No. 1 Feagin, C NW SW section 36-2s-3w, was a cellar. Shell Petroleum Corp. No. 21 Keck, NE SE NE section 5-4s-3w, was a location.

Muskogee County

Oliver Wallace No. 1-A Moore, NW NE NE section 17-14-16, Muskogee County, had sand at 1,572 feet, total depth 1,586 feet, and flowed 5 bbls. of oil in 24 hours.

Stephens County

Carl Carter No. 3 Warden C, SW NW NE section 34-1s-5w, Santa Fe pool, Stephens County, was completed as a Hoxbar sand producer at 723 feet, total depth, pumping 12 bbls. of oil daily.

Robinson and others No. 1 Sadler, NW NE SW section 30-2n-5w, was an abandoned location.

Magnolia Petroleum Co. No. 4 Wilson, SW SE NW NE section 34-1s-5w, an old well, was to be deepened. Duncan Petroleum Co. No. 1-B Gilmore, SE SE NE section 10-2s-5w, was cleaning out at 830 feet. Gulf Oil Corp. No. 14 Simms, SE SW SW section 13-2s-4w, was drilling at 62 feet.

Jefferson County

Bridwell Oil Co. No. 14 Seay, NW NW NE section 10-7s-5w, Oscar-Seay district, Jefferson County, was completed as a 3-bbl. pumper from Hoxbar sand at 1,262-66 feet, total depth.

Same company's No. 16 Seay, NW NW NE section 10-7s-5w, had Hoxbar sand at 1,252-58 feet, total depth 1,261 feet, and pumped 14 bbls. of oil daily.

Rips & Ungerman No. 4 Penniston, NW NE SW section 16-7s-5w, was rigging up machine.

Some First Reports

In Lincoln County, Wilcox Oil & Gas Co. No. 9 Sac & Fox, SW NW SW section 15-14-6, was drilling at 200 feet, and same operator's No. 10 Sac & Fox, NW SW SW section 15-14-6, was digging cellar and pits.

In Grant County, Carter Oil Co. and others No. 2 Crisman, C E half NW NW section 16-25-3w, was digging cellar.

In Okmulgee County, J. E. Dow and others No. 2-A Biedman, NE SE SW SW section 12-14-14, was fishing at 660 feet. Same operator's No. 10 Spurgeon, SE NE NW NW section 13-14-14, was showing for 5 bbls. of oil at 1,067 feet, total depth. Royal Oil & Gas Co. No. 9 Martin, SE cor. section 20-15-14, was drilling at 200 feet. J. L. Selvy No. 3 Mallory, SE NW NE section 2-14-14, was preparing to shoot at 1,460 feet, total depth.

In Comanche County, Fred Hildt No. 1-A Frazee, SE NW SE section 29-2n-10w, was drilling at 160 feet.

In Okfuskee County, W. B. Wells and others No. 3 Fields, C W half SW NW section 13-10-11, was a machine.

Louisiana-Arkansas Fields

(Continued from Page 76)

Arkansas, east of the town of Magnolia. The test cored a hard, slightly porous lime at 7,659-64 feet, which is reported to have shown oil. In running casing, the string was stuck in the hole about 35 joints off bottom, and after attempting to loosen it, operators set the 7-inch pipe where it stuck. Exact depth was not reported. The total depth is 7,664 feet. The lime is believed to correspond to the Reynolds lime, which produces in the single deep well in the Shuler field, several miles to the southeast, and in the Buckner field, which is northwest. Great interest is being shown in the trend of the two fields and the third possible discovery.

Buckner Developments

The Buckner field will presently see important developments as the three drilling tests in the area approach the producing horizon. The Lillian Taubel No. 1 Tatum, located three-quarters of a mile southwest of the sole Standard producer at Buckner, is drilling below 5,800 feet and in a few days will approach the 7,200-foot critical depth. Standard Oil Co. of Louisiana, discoverer of the field, is drilling at shallower depths in No. 1 Crone, one-half mile northeast of production, and in No. 1 Bodcaw-Barbara, one-half mile southwest of the No. 1 McKean producer.

In addition, Standard this week announced location for a wildcat, No. 1 W. P. Phillips, 660 feet north and west of center section 15-17-19, about 6 miles east of the Kerr-Lynn test. Combined results of these important tests will keep southern Arkansas in the spotlight for several weeks at least.

Miller County Completions

The Miller County sector of Rodessa gained one small producer during the week as R. H. Long No .4 Greer, section 10-20-28, came in making 157 bbls. per day on a three-quarter inch choke, with tubing pressure of 30 pounds and no gauge on the casing. Seven-inch casing was set at 6,088 feet and total depth is 6,122 feet. The well was acidized with 4,500 gallons.

Shuler Completions

The Shuler field, most active in Arkansas, added three new wells. Lion Oil Refining Co. No. 4-B Edna Morgan, section 18-18-17, made 2,544 bbls. per day on a 45/64-inch choke, with tubing pressure of 300 pounds, and casing pressure 650 pounds. It is one of the best producers completed in the Jones sand. Total depth is 7,639 feet.

The Marine Oil Co. No. 3 fee, section 17-18-17, made 980 bbls. per day through perforations at 7,521-66 feet on a 25/64-inch choke with tubing pressure of 850 pounds and casing pressure the same. Total depth is 7,590 feet.

Phillips Petroleum Co. No. 2 Marks, one of the highest wells in the field, perforated high at 7,516-50 feet, making 63 bbls. with casing pressure of 2,700 pounds. This is one of the first wells to show presence of an appreciable gas cap in the Jones sand, which has no gas farther down the structure.

Estimated Daily Production

The estimated daily average production of all companies in the week ending February 12 was as follows:

NORTH LOUISIANA

	Bbls.
Bellevue	640
Caddo light	3,800
Caddo heavy	2,435
Converse	650
Cotton Valley heavy	275
Cotton Valley light	*5,055
De Soto and Red River	1,280
Elm Grove	290
Haynesville	3,055
Holly	95
Homer	2,510
Lisbon	9,140
Pleasant Hill	115
Rodessa	44,435
Sarepta-Carterville	330
Sligo	480
Sugar Creek	345
Urania	2,900
Zwolle	765
Total	78,595

SOUTH ARKANSAS

Buckner	405
Champagnolle	1,185
El Dorado	1,850
Lisbon	275
Miller County	400
Nevada	670
Rodessa	7,925
Schuler	13,460
Smackover light	1,990
Smackover heavy	15,900
Stephens	560
Troy	1,310
Urbana	1,200
Total	47,130

Texas side of Rodessa field, 30,725 bbls. daily.

*3,740 bbls. is distillate.

Eastern Fields

(Continued from Page 80)

this company is at 2,000 feet in a test on the Indian Fork Coal Co. In Braxton County, the Pittsburgh & West Virginia Coal Co. is fishing at 2,025 feet in No. 7637, on the M. E. Ramsey farm in Birch district.

In Lewis County, Carnegie Natural Gas Co. is drilling on the E. M. Talbott farm in Freemans Creek district at 1,680 feet. In Lincoln County, South Penn Oil Co. is at 800 feet in a second test on the Jonas V. Alford farm in Duval district. In Monongalia County, the Pittsburgh & West Virginia Gas Co. has a rig up on the Della Lemley farm in Clay district. This company is deepening No. 5179, M. L. Price farm, same district, and is at 2,250 feet. In Battelle district, Cummins and Phillips are drilling at 2,465 feet in No. 2 Louisa Cummins.

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Among Gulf Coast Drilling Contractors

The most interesting development in the Gulf Coast district the past week was furnished by Loffland Brothers who completed Standard Oil Co. of Texas and Salt Dome Oil Corp. No. 1 State which opened the first oil field in the coastal waters of Texas. The well was completed in the Frio sand at 6,030 feet for an initial production of 22 bbls. per hour through a quarter-inch choke. The hole was drilled with a large diesel-electric rig which was set up on constructed "island" in Galveston Bay about a mile offshore from the Chambers County line. The same contractor has spudded an interesting outpost test in the Amelia field, Jefferson County, which is being drilled jointly with Stanolind Oil & Gas Co.

Henry DeArman has moved in one of his rotaries to the Sandy Point field where he is drilling No. 3 J. A. Fite for Stanolind Oil & Gas Co.

Nicklos Drilling Co. received contracts for two wells from the Continental Oil Co., which will be drilled in the Villa Platte field, Evangeline Parish, Coastal Louisiana. Rigs are being set up for No. 1 Pleire McDaniels and No. 1 Mrs. Ed Tate, both offsets to the discovery well. A major extension was given the field by this company when No. 1 Louisiana Land & Improvement Co. was completed for an initial production of 278 bbls. of pipe line oil in 13 hours, flowing through a three-sixteenths inch choke. The hole is bottomed in the Sparta horizon of the Cook Mountain formation at 9,085 feet. It extends the field approximately a mile to the southwest. Two other operations are reported for the Pan American Production Co. at the Valentine field, Lafourche Parish.

A new sand discovery in the Charenton field, St. Mary Parish, Louisiana, was opened by Contractors Smith & McDannald for Pan American Production Co. with the completion of No. 1-A Ecuer on the west side of the field. The hole was drilled to a total depth of 10,317 feet, and production was obtained by plugging back and completing at 2,640 feet for an initial production of 380 bbls. per day through a quarter-inch choke. Contract was received from the Pure Oil Co. for another test to be drilled on the Otterside lease in the Dickinson field. At Bay City, Smith & McDannald are starting their second test, No. 1 Gaines. In the same field, No. 1 Richard, being drilled for Pan American Production Co., is drilling below 8,200 feet and is scheduled to be drilled below 9,300 feet before a production test is made. One rotary is being moved to the Port Barre field, St. Landry Parish, where a joint test with the Pan American Production Co. will be drilled on west flank of the dome. Active operations include wells in the Jennings field, for the Shell Petroleum Corp.; Louise field for the Pure Oil Co.; Dickinson for the Pure Oil Co., and at Long Lake for the Tide Water Associated Oil Co.

T. A. Carlton reports one rig running for the Humble Oil & Refining Co. in the Magnet field.

Superior Drilling Co. is preparing to make a production test on an interesting wildcat in Matagorda County for the Pierce Estate on the company's fee holdings. The hole is bottomed at a sidetracked depth of 6,624 feet, and casing is being cemented for a production test after a 10-minute drill stem test at 6,617-24 feet showed 200 feet of oil-cut mud.

George Echols is starting his No. 1 Whitfield in the Jefferson pool in Marion County; has spudded J. W. Cain's wildcat in San Patricio County and has two rigs running in the Heyser field for himself and Sinclair Prairie Oil Co.

Harry L. Edwards reached the discovery horizon in the East Teleferner field in Victoria County in his No. 1 Robertson and the hole is being drilled deeper after a 10-minute drill stem test at 5,114-29 feet, showed 40 pounds of pressure, 300 feet of oil and 620 feet of salt water. McCurdy & Johnson No. 2 State in the Lockridge field, Brazoria County, has been spudded. Two outfits are on location in the Dickinson field for the Coast Petroleum Corp. and Mid-States Oil Co. while in the Hardin field, McAlester Fuel Oil Co. No. 2 Hinson is drilling below 6,850 feet.

Rowan Drilling Co. has abandoned Strake Petroleum Corp. No. 1 Strunk, a wildcat in Wharton County at 9,496 feet. On the Venice dome, Plaquemines Parish, Louisiana, No. 5 Manhattan Fruit Co., which is being drilled for Tide Water Associated Oil Co., was plugged back from 7,300 feet to 5,000 feet preparatory to sidetracking. Oil sand was cored at 7,250 feet. No. 6 Manhattan has been spudded. Other operations are in the Satsuma and Fairbanks field for the Amerada Petroleum Corp. and Stanolind Oil & Gas Co.

Rutherford Oil Corp. is preparing to deepen its No. 1 Stewart, a half-mile outpost well to the new West Saxet field, Nueces County, after no shows were logged in the discovery horizon. Two rigs are operating in the Van Vleck field for Skelly Oil Co., while in the Buckeye field, a production test is being made on United North & South Development Co. No. 1 Stoddard, which is plugged back from 10,500 feet, sidetracked and redrilled to its present depth of 7,910 feet. *(Continued on Page 110)*

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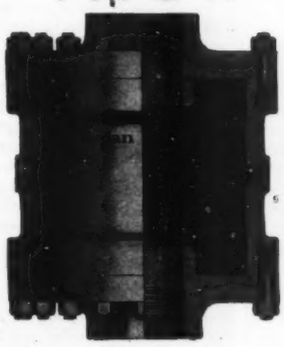

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North and East Texas

By MITCHELL TUCKER

K.M.A. Is the World's Busiest Field; 151 Wells Are Drilling

WICHITA FALLS, Tex., Feb. 14.—With a combined total of 151 wells either drilling or in the process of completion, the K.M.A. pool of southern Wichita and northern Archer counties now becomes the most active drilling field in the world. Statistics for January show the number of completed wells almost double the December figure, while the daily production figure nearly triples that of the preceding month. Sixty completions for an aggregate initial production of 46,253 bbls. were reported during January as compared with 36 completions for an initial production of 15,875 bbls. during December.

Rathke Oil Co. No. 1 Burnett, section 4, H.T.&B. Survey, Abstract 759, prospective 3-mile northwestern extension, filled 1,000 feet with oil the first 30 minutes after a 225-quart nitroglycerin shot. The well is showing about 10,000 feet of gas daily with no water present. Saturation was found in broken formation from 3,551 feet to 3,716 feet, total depth.

With steadily increasing gas pressures, Joe A. Worsham No. 1 Waggoner Brothers, on the northwest side of the field, is flowing 460 bbls. daily through gravel from 3,955 feet to 3,980 feet. Operators are running tubing to complete.

Two miles north of the Clyde Texas No. 1 A. W. Burnside, small producer on the eastern side of the deep sand area, Heyser, Heard & Ciardy No. 1 Fassett & Tuttle failed to find any saturation after coring through the Kemp City lime to a depth of 3,974 feet. The unfavorable showings in this well, and both the Stump and the Burnside wells to the south, tend to further the belief that the eastern boundary of the field is now established. Operators plan, however, to carry the well deeper, possible to 4,000 feet. The test is located about 1 mile east of the Hammon and Hanlon & Buchanan, Inc., No. 1 Fassett, second producer north of the Wichita River.

Two miles northeast of Iowa Park, Grace-Woods made location for No. 1 Fassett, a 4,000-foot wildcat, 330 feet from the north and east lines of section 13, Tarrant County School lands. A wildcat test 7 miles west of Wichita Falls, V. A. Hull and others No. 1 F. Collins, Lot 3, J. Tyler Survey, set 125 feet of surface casing and is now drilling below 590 feet. This is northwest of the pool proper.

Archer County

In the south part of the pool in Archer County, Wheeler & Nazro completed their No. 1 W. P. Ferguson for 950 bbls. from sand 3,827-34 feet. Four other wells are drilling in the county, three of which are below 2,500 feet.

Jack County

Prospects of a new Jack County pool were assured last week when Hanlon & Buchanan, Inc., No. 1 Mary Myers, wildcat in the Rodmose Survey, 7 miles northwest of Jacksboro, began flowing after a 12-minute pumping period, from Bryson sand at 3,432-50 feet. The oil tested 44 gravity and the well is estimated good for 200 bbls. daily.

Young County

Three miles southwest of Graham in the W. L. Cornell Survey of Young County, Pitzer & West completed No. 1 King & Wooten. The test took 60 feet of penetration into the Caddo lime and was treated with 12,000 gallons of acid at 3,868 feet. The well flowed an estimated 300 bbls. while cleaning out and testing. This new producer extends the Sims area one-half mile to the north.

Wilbarger County

Developments on the far west side of the K.M.A. pool received added stimulation last week when two wildcat outposts in Wilbarger County logged a section of saturated sand. Most important of these tests is Lloyd H. Brown and associates No. 1 W. T. Waggoner, section 3, Block 6 in the H.T.&B. Survey, bottomed at 4,090 feet and setting pipe. According to reports the well topped gray lime at 3,999 feet and saturated sand at 4,098 feet. A producer here would be a factor in opening a large area on the Wilbarger-Wichita border to exploration.

EAST CENTRAL TEXAS

DALLAS, Tex., Feb. 14.—Stanolind Oil & Gas Co. No. 1 Tenny Norris, in the K. Thrasher Survey, wildcat test in the Thornton Fault area of Limestone County, has assumed the number one position as the most important wildcat now drilling in East Texas. Last week the well took 202 feet of penetration into a highly porous dolomitic lime topped at 8,525 feet. No showings of oil, gas or water have yet been found. This is the same section of lime found by the Pure Oil Co.'s recent deep failure in the Mexia field. The Pure Oil Co. well topped the dolomitic lime at 8,763 feet with subsea top fixed at 8,225 feet. The Stanolind test was 153 feet higher on the Travis Peak and 101 feet higher on the Lower Marine. Some observers think the lime to be Permian in age, however, others believe it to be a bottom section of the Lower Marine. The formation is nonfossiliferous, all fossils having been destroyed in the process of dolomitization. The crew is now running casing at a total depth of 8,738 feet after which it is planned to drill through the lime section.

Talco Deep Test

Activity commenced last week on the Talco field's 6,600-foot Lower Trinity exploratory test. Operations were started at 4,371 feet in the old, temporarily abandoned Ajo Oil Co. well on the Sandes lands. The test will be known as the Chenault No. 1 Jeff Saunders, in the C. Paine Survey, about 1 mile west of the town of Talco, and is being financed in part by the Chambers of Commerce of the near-by towns.

Aside from this deep prospect, activity in the field last week was slightly under par with only three completions recorded and five wells actively drilling.

Cherokee Wildcat

Machinery and materials were being moved in for the drilling of American Liberty Oil Co. and Lide & Greer No. 1 S. L. Tankersley. The test is in the Jose Pineda Survey, about 2 miles northeast of Ironton and 3½ miles west of Jacksonville, in Cherokee County. It will be carried to the Woodbine sand, expected around 5,100 feet. The operator's block consists of about 3,000 acres in the J. Pineda, G. Fossett, G. Cansey, I. Reynolds and other nearby surveys. Humble Oil & Refining Co., which holds several thousand acres in the general area, contributed toward the test. The structure, as mapped, is said to show a slight nosing against the Jacksonville-Boggy Bayou Fault.

Flag Lake Pool

Five new locations are planned for the new Flagg Lake pool in the Tool area, northwestern Henderson County, on the Mabank-Malakoff Fault. This pool was opened a few months ago by Sherman-Hunt and others No. 1 Dillard, completed in the Woodbine sand for 130 bbls. daily. Hunt Oil Co. of Tyler has staked north, south and west offsets to the discovery well, which will be known as Nos. 1, 2 and 3 Dillard, in the Henry Jeffery Survey. Half a mile east of the discovery well, D'Armond & Co. of Tyler are moving in machinery for a new test, the exact location of which was not announced. J. C. Jones, Mabank operator, was reported planning to drill a fifth test about 3 miles north and east of the discovery well, believed located on a projection of the fault.

Kelsey Dome

Tom Hunter and American Liberty Oil Co. No. 1 Carter, J. H. Fields Survey, deep test on the Kelsey dome in Upshur County, is reaming down to shut off salt water encountered from 6,980 feet to 7,111 feet. On a 15-minute drill stem test from 6,980 feet to 7,111 feet, salt water rose 1,500 feet in the drill stem. This series of porous sections is comparable to the Rodessa section in the Basal Glen Rose of the Lower Trinity, now producing in Louisiana, Texas and Arkansas.

New York-Penna. Gas Fields

COUDERSPORT, Pa., Feb. 14.—One dry hole and two new locations are included in the New York-Pennsylvania gas-field report for the week ended February 11.

New Penn Development Corp. completed a test on the Johnson Estate farm in Willing Township, Allegany County, New York, at 4,745 feet, where salt water drowned out a show of gas encountered 1 foot higher. This test found the Onondaga at 4,703 feet and the top of the Oriskany at 4,741 feet.

Both of the new locations are in Woodhull Township, Steuben County, New York, and both were staked by G. L. Cabot, Inc. One is on the C. Groves farm, 333 feet from the north line and 625 feet east of the road, and the other is on the Neva Husted farm, 943 feet from the west road and 213 feet from the north road.

New York Operations

New York State Natural Gas Co. has spudded in its test on the Lyle Wheatcraft farm and has the rig up for another on the C. D. Carr farm, both in Woodhull Township. New Penn Development Co. is idle on its J. Seeley farm location.

Empire Producing Co. is drilling at 4,025 feet on the Della Mulvey farm, Alma Township, and Belmont Quadrangle Drilling Co. at 4,425 feet on the F. Hilligas farm, Willing Township, both in Allegany County.

New York State Natural Gas Co. is drilling at 630 feet on the S. H. English farm, Van Etten Township, Chemung County, and New Penn Development Corp. is shut down at 6,600 feet on the Federal Land Bank farm, Montour Township, Schuyler County.

Pennsylvania Operations

Only one of four Potter County operations is drilling. French and others are at 2,385 feet on the H. O. Perry farm, Genesee Township. In other tests in this county, New Penn Development Co. is cleaning out on the Crawford farm, Keating Township, and is shut down on the Haupt farm, West Branch Township, and Ward Wasson is shut down at 5,180 feet on the R. B. Hall farm, Genesee Township.

Evjen and others have a fishing job on the Dusenberry farm, Watson Township, Warren County, at 4,544 feet, 62 feet below the first gas show in this test, erroneously reported last week as 1,000,000 instead of 1,000 feet. Updegraff has temporarily abandoned his test on the O. E. Erickson farm, Elk Township, this county, at 4,830 feet.

McKenry and others are still fishing at 4,413 feet on the Stellman farm, Rockland Township, Venango County, as is F. C. Deemer at 7,155 feet on the Verstine & Kline farm, Eldred Township, Jefferson County. New York State Natural Gas Co. is now erecting the rig for the test on the W. A. Simmons farm, Brookfield Township, Tioga County.

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West, Central and Panhandle Texas

By MITCHELL TUCKER

Wasson-Denver Field Leads New Permian Development

FORT WORTH, Tex., Feb. 14.—The Wasson-Denver field of Gaines and Yoakum counties in West Texas continues to lead all others in the present development program in the North Permian Basin territory. Nineteen wells are rigging up or drilling in the field. Total producers number 32, having a daily average production of 1,920 bbls. Production is allocated upon a per well basis, and allowed 60 bbls. per well daily.

About midway between the original Denver and Wasson fields (before they were connected as one) Shell Petroleum Co. is apparently affording a 1½-mile extension eastward from production in its No. 1-C George Baumgart, which cored saturated Permian at 4,614-4,917 feet, and is preparing to run casing. Nearest production is Shell No. 1-A Baumgart which extended the field 1 mile east at the time of its completion. Completion of No. 1-C places the Wasson production just 5 miles southwest of the Bennett field of southeastern Yoakum County, where there are now 10 producers and four drilling wells. Some geologists are beginning to contour the Bennett field into the Wasson as all markers check closely.

Gulf States Oil Co. of Houston has taken over a 2,500-acre checkerboarded block from Gulf Oil Corp. in northeastern Yoakum County, and will continue the wildcat campaign in the northern basin counties by the immediate drilling of No. 1 E. A. Graham, probably in the southwest corner of section 267. Contract depth is 5,200 feet, and spudding date is April 5 or before.

Magnolia Petroleum Co. has entered the wildcat program in this territory by staking a location for the drilling of No. 1 J. D. Webb, section 477, Block D, John H. Gibson Survey, Yoakum County, 2 miles southwest of the town of Plains. The well is situated 4 miles north and slightly east of the Bohago area which was opened last year by a wildcat which gauged 51 bbls. per day initially.

Bohago & Bond No. 1 J. L. West, 1½ miles southeast of their Yoakum discovery, attracted considerable attention last week when they encountered saturated Permian at a favorable depth and recovered a well saturated core from 5,183-86 feet. More penetration is to be taken before setting casing.

Outpost tests on three sides of the Slaughter field of southern Hockley County, which has three producing wells, all are showing promise of extending the field. Sid Richardson No. 1 Slaughter, 2¼ miles north of production, logged first showings of oil at 4,889-4,913 feet, and continues drilling ahead in search of additional saturation. One mile southeast of production, Gulf Oil Corp. No. 1 M. B. Gordon has topped the anhydrite comparably with producers in the field. Two miles southwest just into Terry County, Gulf No. 1 Mallett Lands is drilling at 4,210 feet in lime.

The five-well Seminole field of central Gaines County, which has been slowly developed because of no pipe line outlet, is also sharing the northern basin activity. Amerada Petroleum Co. No. 1 T. S. Riley is providing a quarter-mile extension northward having made an initial gauge of 298 bbls. daily through 1-inch choke, after selectively completing through perforated pipe set on bottom in an effort to minimize gas-oil ratios. A very satisfactory ratio was obtained, testing 1,011 to 1. One mile east of Seminole production, the same operator's No. 1 R. W. Robertson was swabbed and bailed dry without important showings of oil, gas or water in the Permian. Drilling is continuing below 5,112 feet. Heavy gas showings were logged above this horizon, however.

Ordovician Tests

Magnolia Petroleum Co. has elected to deepen its No. 1-A McKee, Ordovician wildcat in the Imperial area of northern Pecos County, following several attractive flows made from a 9-foot section of saturation in the Simpson lime. Following over a month testing period, the company was unable to make a commercial producer in this level, and the hole will be carried on down in search of more prolific pays either in the Simpson or Ellenburger (Lower Ordovician). It is now drilling at 5,355 feet in sand and shale, carrying 1,600 feet of oil in the hole.

Stanley A. Thompson and others No. 1 Elsinore Cattle Co., second deep Ordovician test now drilling in Pecos County (20 miles south of Fort Stockton), failed to obtain favorable showings on a drill stem test taken at 7,128 feet. Cable tools are being rigged up to deepen.

Edwards County's Ordovician wildcat, Amon G. Carter and others No. 1 Frank Sweeten, 1½ miles east of Rock Springs, has found no showings to a total depth of 6,501 feet, and it will be abandoned.

Shell Purchase

The Shell Petroleum Co. has purchased two 160-acre tracts with eight producing wells in the McClintic pool of Crane and Upton counties from the Amtex Petroleum Co. of Fort Worth, for a combined consideration of $225,000, part in cash and the remainder in oil.

WEST CENTRAL TEXAS

Prospective revival of interest in Callahan County Ordovician drilling was seen during the past week following attractive showings in Hal Hughes and associates No. 1 Tom Poindexter, 30 miles southeast of Abilene near Oplin. First stimulation of interest in the Ordovician possibilities for this territory were given after discovery of Ellenburger production in Eastland County immediately to the east. The Hughes test, second in that vicinity for the Abilene operator, was drilled as a south offset to the well drilled in 1933 by Drew Beans which was shot into water and junked. The present Hughes test topped the sand at 4,369 feet and at a total depth of 4,380 feet developed a gas flow of about 4,000,000 feet. Casing has been swung to 4,370 feet, and a spray of salt water with some oil intruded, which is thought to be from the upper horizons. Testing continues pending decision to drill deeper. Hal Hughes is interested with several California operators in the well, holding a block of around 9,000 acres.

Following the general play from Jones County's Avoca field, Fain-McGaha Oil Corp. of Wichita Falls moved in the fourth rig in operation on the T. G. Hendrick ranch in northwest Shackelford and southeast Haskell counties. The company's new wildcat, in the center of the W half of section 104, Indianola Railroad Survey, Haskell County, is 1 mile northeast of a Superior Oil Corp. test on the same trend northeast from the Jones County deep production.

The fourth King sand produced in the Ivy pool of northwest Shackelford County was found as a direct east offset to Owens-Snebold No. 1 Haterius, which opened Palo Pinto pay in the field. Iron Mountain Oil Co. was drilling No. 1 O. E. Beck as an offset to the deeper pay, when the well headed through 8-inch hole several times in drilling from 1,921 to 1,933 feet. Operators plan to run 6-inch casing and complete this well in the King horizon, and drill another twin to the Palo Pinto.

J. A. Walker of Tulsa announced location for a 4,000-foot wildcat 1 mile south of Woodson in Throckmorton County, on the Dickey Brothers property. Objective will be the Caddo lime now yielding large productions in the James pool of central Young County.

Important developments have been consistently occurring in Brown County, near Brownwood. Heading the results for last week, James Windham No. 1 Moore, 2 miles northeast of Byrds Store, was deepened from its former producing depth of 2,449 feet (where it had been flowing about 20 bbls. daily for three years), a total of 6 feet or to 2,455 feet, and the well starting flowing over the masthead. During the past 24 hours it made four 20-minute flows, averaging 100 bbls. each. Other important tests in the Salt Creek, Frye, and Dobbs areas are being closely watched in Brown County.

PANHANDLE

A public hearing is to be held in Amarillo on February 22 before the Railroad Commission, preparatory to issuing a sour-gas proration order. There now exists a proration order for the sweet-gas area, but none for the sour gas. Phillips Petroleum Co., one of the largest operators in the district, petitioned for the hearing.

I.T.I.O. company's important wildcat in northwest Sherman County, No. 1 Mollie Davis, section 404, Block 1-T, T.&N.O. Survey, 20 miles north of Dumas, is drilling at 3,455 feet in search of oil production below their discovery of a gas-bearing horizon at about 3,100 feet, which is testing about 30,000,000 feet daily.

WEST TEXAS COMPLETIONS

(24-hour gauges)

Andrews County

Humble Oil & Refining Co. No. 36 J. S. Means, 4,420-4,522 feet, 388 bbls.; No. 17 R. M. Means, 4,427-4,534 feet, 458 bbls.

Crane County

Chaote & Hogan No. 1 S. E. Carter, dry and abandoned at total depth of 2,195 feet. Gulf Oil Corp. No. 11 Henderson, 3,527-45 feet, 1,920 bbls.

Crockett County

Moore Brothers Corp. No. 1 Perner, dry and abandoned at total depth of 9,105 feet. Harry Ringler No. 2 Hoover, dry and abandoned at total depth of 2,122 feet.

Ector County

J. D. Bodkins No. 1 Edwards, dry and abandoned at total depth of 4,901 feet. W. A. Dunning, Jr. No. 4 Slater, 4,220-91 feet, 210 bbls. E. E. Fogelson No. 5-A University, 3,400-3,646 feet, 520 bbls. Gulf Oil Corp. No. 63 Goldsmith, 4,180-4,250 feet, 1,880 bbls.; No. 65 Goldsmith, 4,119-4,220 feet, 736 bbls.; No. 60 Goldsmith, 4,150-4,275 feet, 608 bbls.; No. 67 Goldsmith, 4,139-4,240 feet, 852 bbls. Humble Oil & Refining Co. No. 8-C Scharbauer, 4,166-4,210 feet, 1,042 bbls. Shell Petroleum Corp. No. 3-A Cummins, 4,180-4,250 feet, 1,320 bbls. Stanolind Oil & Gas Co. No. 8-B Cowden, 3,990-4,165 feet, 1,111 bbls.

Fisher County

General Crude No. 6 Young, 2,873-3,147 feet, 11 bbls.

Howard County

Continental Oil Co. No. 3-C Chalk, 2,946-3,239 feet, 40 bbls. Merrick & Bristow No. 14 Hooks, 2,920-3,227 feet, 1,240 bbls. Noble Drilling Co. No. 4 Chalk, 2,900-3,025 feet, 1,056 bbls. Sinclair Prairie No. 52 Dodge, 2,495-2,825 feet, 350 bbls.

Mitchell County

Magnolia Petroleum Co. No. 9 Foster, 2,560-2,865 feet, 144 bbls.

Pecos County

Harry Baker and others No. 1 White & Baker, dry and abandoned at total depth of 1,939 feet. Big Bend Pipe Line No. 1 Iowa Realty Tr., 1,625-1,845 feet, 263 bbls. Charles E. Marsh, Jr. No. 2 Notterville, 2,195-2,295 feet, 210 bbls. Shell Petroleum Corp. No. 2-G Bower-University, 1,683-88 feet, 146 bbls. Thomason

Production Co. No. 3 Pecos Valley, 1,580-1,656 feet, 1,500,000 feet gas.

Upton County

Bennett Oil Co. No. 4 Sherk, 2,441-2,477 feet, 502 bbls. Harry Hines No. 1 Harlan, dry and abandoned at total depth of 2,174 feet. Magnus Oil Co. No. 1 B. W. Owens, dry and abandoned at total depth of 2,840 feet. Harve Nolan No. 1 Rhoda E. Long, 2,025-2,100 feet, 24 bbls. per day. A. W. Rutter No. 1 Egolf, dry and abandoned at total depth of 3,295 feet. Shell Petroleum Corp. No. 1 Baker, 2,165-2,230 feet, 792 bbls.

Ward County

Gulf Oil Corp. No. 76 Estes, 2,475-2,686 feet, 287 bbls.; No. 78 Estes, 2,476-2,688 feet, 2,374 bbls. Humble Oil & Refining Co. No. 27 Richter, 2,457-2,602 feet, 596 bbls.; No. 21-F University, 2,504-2,750 feet, 467 bbls.

Winkler County

Gulf Oil Corp. No. 27 O. Clapp, 2,772-3,090 feet, 61 bbls. Stanolind Oil & Gas Co. No. 3 Cowden, 2,890-3,033 feet, 365 bbls.

Yoakum County

Denver No. 3 Whittenberg, 4,830-5,028 feet, 457 bbls. Shell Petroleum Corp. No. 1-B Baumgart, 4,850-5,010 feet, 487 bbls. Stogner & Pipkin No. 1 Pollard, dry and abandoned at total depth of 5,307 feet.

WEST CENTRAL TEXAS COMPLETIONS

Completions, week ending February 12, 1938.

Jones County

Ungren & Frazier No. 2-C Dorsey, abandoned at 2,360 feet, total depth, deepened from 2,067 feet. Lewis Production Co. No. 11 Sayles, 123 bbls. in 24 hours from sand at 1,963-77 feet, total depth. Fain-McGaha Oil Corp. No. 2 Mrs. L. E. Williams, 326 bbls. in 24 hours from sand at 1,927-49 feet, total depth, shot with 40 quarts. Bert Fields No. 1 C. L. Carter and others, 196 bbls. in 24 hours from 1,875-85 feet, shot 20 quarts, deepened to 1,917 feet, total depth, plugged back to 1,904 feet. Iron Mountain Oil Co. and Humble No. 2 H. B. Haterius, 787 bbls. in three hours, seven minutes, from natural lime at 3,254-68 feet, total depth. Iron Mountain Oil Co. and Humble No. 2 Carl Olander, 515 bbls. in three hours, 10 minutes, from natural lime at 3,184-3,202 feet, total depth. Roeser & Pendleton, Inc., No. 1 fee, abandoned dry at 3,877 feet, total depth. Haterius and Ungren & Frazier No. 1 Olson, abandoned dry at 5,269 feet, total depth. R. B. Farris and others No. 1 Mrs. A. E. Nowlin, abandoned dry at total depth 3,567 feet, plugged back to 2,170 feet, acidized without results. Grisham-Hunter Corp. No. 1 E. D. Appling, abandoned dry at 4,610 feet, total depth. King Oil Co. No. 2 C. L. Carter and others, 298 bbls. in 11 hours from 1,925-47 feet, total depth, shot 40 quarts.

Shackelford County

J. L. Hart and G. M. Neff No. 1 L. A. Sanders, dry at 751 feet, total depth, shot 10 quarts from 740 feet without results. Mrs. Will McKemie No. 24 L. C. Huskey, dry at 490 feet, total depth. Tannehill, Kiser & Fleming No. 39 J. B. Matthews, dry at 1,137 feet, total depth. W. M. Reed No. 5 C. H. Arendt, dry at 275 feet, total depth. Dickey Brothers No. 3 C. H. Sanford, dry at 625 feet, total depth.

Callahan County

Johnson & Odell No. 1 D. F. Harp, dry at 580 feet, total depth. C. B. Holmes No. 1 Mike Hughes, dry at 870 feet, total depth. S. B. Owens No. 1 J. E. Ross, dry at 1,792 feet, total depth.

Fisher County

Southern Oil Corp. No. 1 Bacot, dry at 4,037 feet, total depth. General Crude Oil Co. No. 6 J. A. Young, 11 bbls. in 24 hours, 2,875-2,923 feet, 3,000 gallons acid, total depth 3,147 feet, plugged back and perforated through casing.

Haskell County

S. B. Roberts and Brown Eagle Oil Co. No. 1 T. G. Hendrick, 31 bbls. oil, 4 bbls. water in 24 hours from 1,690-1,721 feet, total depth.

Throckmorton County

A. B. Swain No. 1 Horton, dry at 510 feet, total depth.

(Continued on Page 107)

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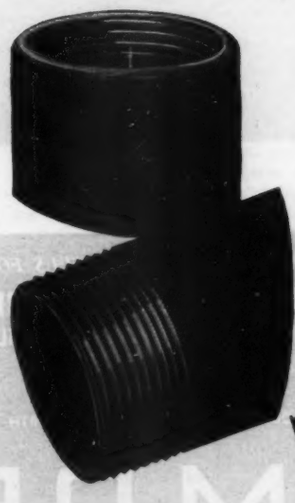

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ATLAS IMPERIAL

Southwest Texas District

By F. L. SINGLETON

West Saxet Pool Extended; Pool Opened in San Patricio

CORPUS CHRISTI, Tex., Feb. 14.—A 1,500-foot east extension was recorded for the newly opened West Saxet field, Nueces County, with the completion of Renwar Oil Corp. No. 1 McKinzie, which flowed 350 bbls. per day through a three-sixteenths inch choke with 950 pounds of tubing pressure and 1,075 pounds of casing pressure. Production was obtained by perforating the casing at 5,822-27 feet. This is the first producer to be completed since the discovery well. Attention has shifted to two other outposts, one of which has apparently defined the field to the west. Half a mile west of the discovery, preparations were being made by Rutherford Oil Corp. to deepen No. 1 Stewart from 6,212 feet to 7,000 feet as no encouraging showings were logged in the discovery horizon. One mile southwest, in the A.B.&M. Survey, mechanical trouble has delayed the progress of Renwar Oil Corp. No. 1 Morgan, which is drilling ahead in a sidetracked hole below 5,475 feet. Another outpost location was reported made by Ran Morgan, approximately 6,000 feet due south of the discovery well in the A.B.&M. Survey No. 411.

At a hearing before the railroad commission the past week, engineers for the Phillips Petroleum Co. requested that the West Saxet structure be developed on a 15-acre spacing basis. It was stated that the structure represents a major reservoir and that the per-acre recovery was estimated at 15,000 bbls.

San Patricio Discovery

A new oil field in San Patricio County was assured with the showing of Plymouth Oil Co. No. 1 F. Brigham which is running casing for a production test after showing 1,030 feet of 36-gravity oil and 125 pounds of working pressure on a drill stem test. The test lasted 10 minutes and was made in the Frio formation at 5,650-65 feet, the total depth. The well is 2 miles east of the White Point gas field in section 62, Pauls Subdivision of the Coleman-Fulton Pasture Co. lands on a block of approximately 2,700 acres. Protection acreage is held by Shell Petroleum Corp., Humble Oil & Refining Co., Sinclair Prairie Oil Co., and Arkansas Fuel Oil Co.

Corpus Christi District

In the Corpus Christi field, operators were watching the progress of Richardson Petroleum Co. No. 1 A. C. Erwin, which has indicated a 4,000-foot east extension to the newly opened 5,100-foot sand. Sand showing oil and gas was logged at 5,169-79 feet, and the hole will be cored to 5,200 feet before liner is set for a production test. The outcome is expected to determine the productivity of this horizon which has been more or less uncertain due to the showing of the first test, J. K. Culton No. 4 Baldwin, which is producing pipe line oil along with considerable salt water. Operators are highly interested in this new sand discovery owing to the decline in production from the 4,000-foot zone. For the time being no large deepening campaign is anticipated due to a temporary rule which prohibits deepening of all wells which have used 5½-inch casing as the production string. It was stated before the railroad commission that practically all wells drilled in the field have used that size casing and engineers for the commission stated that deepening of wells through 5½-inch casing would be hazardous because of the danger of knocking a hole in the pipe that would probably result in a blow-out.

A new producer in the Richard King field, Nueces County, was indicated by the showing of Southern Mineral Corp. No. 5 King. Oil sand was logged at 4,008-17 feet and 7-inch casing was cemented on bottom. Location is in section 6 of the King Farm lots.

In the Luby field, Seaboard Oil Corp. No. 11 Luby is being completed in the 4,300-foot zone. The hole is bottomed at 4,353 feet and the casing has been perforated at 4,342-45½ feet.

San Patricio County

In San Patricio County, southeast of Gregory in the T. T. Williamson Survey, A. L. Bob (Danery Oil Co.) No. 2 Green is coring ahead after logging sand showing gas and distillate at 6,696-6,713 feet. There are three other active wildcats in San Patricio County, and location for another was made by the Humble Oil & Refinery Co. No. 1 Smith and Talbert, located approximately 2 miles east of the Plymouth field, in Lot 2, of the Fourth Addition of the Taft Farm lands.

In the East Telferner field, Victoria County, Harry L. Edwards No. 1 D. L. Robertson, an east offset to the discovery well, cored sand at 5,114-29 feet, and on a 10-minute drillstem test, showed 40 pounds of pressure, 300 feet of oil and mud and 620 feet of salt water. It is being deepened to the Frio formation below 6,000 feet, where a good showing was found in the discovery well, before it was plugged back and completed in the 5,100-foot sand. One-half mile southeast of the Placedo field, Portilla Drilling Co. is building derrick for No. 1 P. H. Welder in the S.A.&M.G. Survey. In the McFaddin field, Barnsdall Oil Co. No. 3 McFaddin flowed 65 bbls. in 12 hours through a one-eighth inch choke with 75 pounds casing pressure and 350 pounds tubing pressure. Sand was logged at 4,403-09 feet, total depth. Seven-inch casing was cemented at 4,400 feet. An active drilling program by Barnsdall Oil Co. and Transwestern Oil Co. is getting under way. One well to 20 acres is being followed by the two companies.

Along the Jackson Trend, and in Bee County, Dirks Brothers were preparing to retest No. 1 Mangus Beck after it showed gas, some oil and salt water. Bottomed in the Pettus sand at 4,273 feet, the production test was made through perforated casing at 4,219-22 feet, and the well was brought in through a one-eighth inch choke, with tubing pressure 1,050 pounds and shut-in casing pressure 1,300 pounds. Casing was cemented last week after a drillstem test at 4,200-25 feet showed 200 pounds of working pressure and 10 feet of oil-cut mud.

In Live Oak County, a production test was scheduled to be made on Hanthon-Nelson, Inc., and J. Chew No. 1 Alma McNeil, a prospective pool opener in the Alexander Parks Survey. Sand and sandy shale with oil and gas showings was logged in the Pettus sand at 5,000-76 feet, total depth.

Laredo District

In the Laredo district, two outposts in the Benavides field, Duval County, were being watched as preliminary tests indicated producers. West of production about 1,300 feet, Reliance Oil & Royalty Co. No. 1 Moyer, in section 8, cored Pettus sand at 5,386-94 feet, and on a 15-minute drillstem test, tested 30 feet of oil and 80 feet of mud, with 200 pounds of working pressure. Approximately 1,000 feet south of the nearest production, Hiawatha Oil & Gas Co. No. 8 Southland Life Insurance Co. is being completed in the Gravit sand bottomed at 4,792 feet. Sand showing oil was logged at 4,773-85 feet.

Colton, Leslie & Mitchell No. 1 Lopez, F. Lopez Survey No. 55, perforated casing at 1,694-99 feet and on a production test, swabbed brackish water, with a slight show of oil. Sidewall cores at 1,698 and 1,803 feet showed sand with an oil odor. The hole is bottomed at 2,801 feet, with 7-inch casing cemented at 1,865 feet.

The name "Weslaco" was given the new field, opened by the Atlantic Refining Co. on the American Rio Grande lease, in Hidalgo County. The well was recompleted through perforated casing at 8,634-42 feet for an initial production of 71 bbls. of 51-gravity distillate through a three-eighths inch choke. The well may be worked over, as it is making approximately 14 bbls. of water every 24 hours. North and west of the Mestinas gas field, north central part of the county, Gulf States Oil Co. is moving in a rig for No. 1 Josefa in Share 156, San Salvador Del Tule grant. The first activity in several months in the Mercedes field is scheduled to get under way in the near future. Union Sulphur Co. has rig up for No. 12 American Rio Grande, in Tract 2358, Block 49.

COMPLETED WELLS

Completed wells in proven Southwest Texas fields, with their total depth, and the initial 24-hour production of the producing wells, were as follows:

Aransas County

McCampbell field: Atlantic Refining Co. No. 2-B Porterfield, 7,243 feet, 150 bbls., three-sixteenths inch choke.

Bee County

Plummer field: W. C. McBride No. 2-A Plummer, 2,470 feet, abandoned.

Brooks County

Alta Mesa field: Standard Oil Co. of Texas No. 4 Garcia, 2,576 feet, top oil sand 2,516 feet, 216 bbls., pumping. Standard Oil Co. of Texas No. 11 Mestena Oil & Gas Co., 2,476 feet, 131 bbls., jetting.

Caldwell County

Branyon field: Hanthon-Nelson, Inc., No. 6 Branyon, 2,309 feet, abandoned. Martel Petroleum Co. No. 5-E Young, 2,338 feet, 87 bbls., pumping.

Dale field: Ralph Ogden No. 1-B Lacky, 2,630 feet, 24 bbls. in six hours. C. L. Riddle No. 1 William H. Riddle, 2,337 feet, abandoned.

Luling field: C. H. Mee No. 2 Cosey, 2,145 feet, 30 bbls., pumping. Philtop Oil & Gas Co. No. 2 Dorn, 2,104 feet, 150 bbls. flowing and pumping.

Lytton Springs field: E. R. Crosby No. 1 Crenshaw, 1,707 feet, 5 bbls., pumping.

Duval County

Benavides field: Republic Production Co. No. 2-A Boy, 3,896 feet, top oil sand 3,890 feet, 129 bbls., one-eighth inch choke. Bridwell Oil Co. No. 10 Ancera, 4,777 feet, 124 bbls., one-eighth inch choke. Hiawatha Oil & Gas Co. No. 6 Southern Life Insurance Co., 5,505 feet, 66 bbls., 16 hours, five-thirty-seconds inch choke.

Lundell field: Government wells Oil Co. No. 15 Lundell, 1,507 feet, top oil sand 1,497 feet, 11 bbls., three-eighths inch choke.

Peters field: G. G. Mortimer No. 2-A Peters, 2,599 feet, perforated casing 2,556-68 feet, dry gas well.

Piedra Lumbre field: Magnolia Petroleum Co. No. 14 Duval County Ranch Co., 2,085 feet, 12 bbls. per hour, three-eighths inch choke.

Guadalupe County

Darst Creek field: E. A. Tapp No. 3 Posey, 2,626 feet, 95 bbls. of oil, 25 bbls. of water, pumping.

Live Oak County

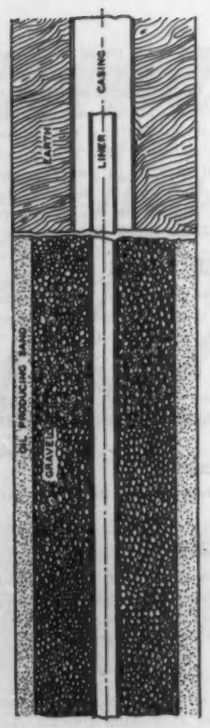
Ezzell field: L. W. Powell and others No. 2 Simon, 1,484 feet, 30 bbls., pumping. E. M. Jones No. 2-F Ezzell, 1,704 feet, abandoned.

Nueces County

Luby field: Seaboard Oil Co. No. 4 Luby, 5,072 feet, 130 bbls., one-eighth inch choke.

Richard King field: Southern Mineral Corp. No. 4 King, 4,266 feet, perforated casing 4,023-26½ feet, 81

"Gravel PACKING"



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Regardless of your underreaming requirements the MacClatchie Wall Scraper evenly spreads the cutting load over three husky cutters. This exclusive MacClatchie feature is daily saving operators thousands of dollars by giving—

More full gauge hole per run because there is less load per cutter.

Smooth, easy rotation that protects your drill string from twist off strains.

Perfect cylindrical wells because there is no wobble, no vibration, and no tendency for scraper to whip.

Triple cutting action is just one of MacClatchie's engineered features. Check these too! TREMENDOUS BODY STRENGTH—POSITIVE CUTTER EXPANSION AND CONTRACTION—POSITIVE NOTIFICATION AT THE RIG FLOOR WHEN CUTTERS ARE EXPANDED (the circulation plunger throttles the pump until sufficient pressure is built up to force the cutter open, at which time the wash pipe moves away from plunger and causes the pump to speed up. A WIDE RANGE OF SCRAPING CAPACITIES—DOUBLE ACTION CIRCULATION (circulation at each cutter as well as through the bit).

The MacClatchie Giant Wall Scraper, illustrated herewith, will readily pass through 11¾" casing, but once expanded has a cutting range of 30" in diameter. Because of its wide range and smooth action it is the outstanding choice of operators for enlarging holes through the producing zone.

If you are interested in increasing production, reducing pumping trouble, speeding up cleaning out operations and decreasing well cavings, write for detailed information on the new "Gravel Bed" Method of setting liners. MacClatchie engineers will gladly furnish you valuable information on this subject.

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bbls. of fluid, 30 per cent salt water, five-sixteenths inch choke.

Clara Driscoll field: Stanolind Oil & Gas Co. No. 1 Kampfhentel, 5,550 feet, plugged back 5,355 feet, perforated casing 5,325-40 feet, 124 bbls., three-sixteenths inch choke.

Saxet field: Houston Oil Co. No. 31 Morgan, 4,563 feet, plugged back 4,072 feet, perforated casing 4,065-69 feet, 68 bbls., three-sixteenths inch choke. Southern Minerals Corp. No. 3 Till, 4,872 feet, 64 bbls., five-eighths inch choke.

Karnes County

South Burnell field: Luling Oil & Gas Co. No. 19 Boyce, 3,675 feet, 157 bbls., three-sixteenths inch hole.

Refugio County

Tomoconnor field: Quintana Petroleum Co. No. 61-A O'Connor, 5,940 feet, perforated casing 5,886-94 feet, 1,235 bbls., three-eighths inch choke. Quintana Petroleum Co. No. 13 Heard, 5,962 feet, 650 bbls., quarter inch choke. Quintana Petroleum Co. No. 6 Bauer, 5,941 feet, perforated casing 5,754-62 feet, 1,376 bbls., three-eighths inch choke. Hewitt and Daugherty No. 64 Lambert, 5,937 feet, perforated casing 5,860-72 feet, 308 bbls., three-sixteenths inch choke.

Webb County

Kiliam field: C. H. Bailey No. 4 Garcia, 2,135 feet, abandoned. O. W. Kiliam No. 34 Garcia, oil sand 1,987-93 feet, 40 bbls., pumping.

Oilton field: M. E. Brook No. 4 Uzzell, 2,002 feet, 200 bbls., pumping. Cox and Hamon No. 2 Wise, 2,003 feet, 20 bbls., quarter-inch choke. Kiliam and Campbell No. 3 Thompson, 1,974½ feet, plugged back 1,940 feet, perforated casing 1,928-34 feet, 75 bbls., pumping. J. R. B. Moore No. 6 Martin, oil sand 1,883-92½ feet, 75 bbls., pumping.

Victoria County

Heyser field: Humble Oil & Refining Co.-Plymouth Oil Co. No. 20-A Welder, 5,472 feet, 167 bbls., three-sixteenths inch choke. Magnolia Petroleum Co. No. 5 O. M. Lander, sand 5,740-47 feet, 66 bbls., eight hours, one-eighth inch choke.

McFaddin field: Barnsdall Oil Co. No. 3 McFaddin, sand 4,403-09 feet, 65 bbls., 12 hours, one-eighth inch choke.

Canadian Gasoline Sales Gain Except in Saskatchewan

OTTAWA, Ontario.—Official figures just issued show that in September, 1937, Canadian gasoline sales totaled 539,935,000 gallons compared with 465,596,000 gallons in the same period of 1936. Incomplete returns for October and November indicate increases in all the provinces reporting except Saskatchewan.

Imports of natural casinghead, compression or absorption gasoline lighter than .6690 gravity in November totaled 6,500,893 gallons worth $445,813 of which 3,936,033 gallons worth $269,249 came from the United States and the remainder from Peru. In October imports totaled 4,639,519 gallons worth $329,060 of which 2,117,111 gallons worth $154,831 were from the United States and the remainder from Peru.

Imports of gasoline lighter than .8235 specific gravity in November were 1,825,660 gallons worth $164,718 compared with 2,711,319 gallons worth $247,837 in October, all from the United States. Exports of gasoline and naphtha from Canada in November were 73,100 gallons worth $6,128 against 624,119 gallons worth $50,875 in October.

Confiscated East Texas Oil Sold Under Receivership

FORT WORTH, Tex.—Gus Blankenship, receiver of more than 1,000,000 bbls. of East Texas oil against which the state has levied in confiscation suit, sold on special court order for 20 cents per barrel 18,209 bbls. stored in pits at Beaver Oil Reclamation Co. plant. The oil was placed under the receivership May 15, 1937, and was sold to Mercury Pipe Line Co.

Annual Petroleum Conference Of Illinois and Indiana

The sixth annual Petroleum Conference of Illinois-Indiana will be held in Robinson, Ill., Saturday, June 4.

California Field Report

By
L. P. STOCKMAN

Wilmington's Output 91,268 Barrels; No Relief Promised

LOS ANGELES, Calif., Feb. 14.—With the Wilmington field in Los Angeles Basin producing 91,268 bbls. per day, and the total production of California increased to an average of 738,250 bbls. per day in the week ending February 12, it is evident that Pacific Coastal producers feel they are not affected by the general oil situation east of the Rocky Mountains, or that they have an unhealthy disregard for it.

Five wells in the Wilmington field are producing over 25,000 bbls. per day. In no field east of California would such a thing be permitted, even by the owners. The Wilmington field committee tried to induce operators to control production to 25 per cent of potential, but failed, and efforts are being made to limit Terminal zone wells to a maximum of 2,000 bbls. per day. At present Bankline Oil Co. No. 2 Union Pacific is flowing 6,605 bbls. daily; Hancock Oil Co. No. 1-A Harbor, 3,990 bbls.; Superior Oil Co. No. 1 Community, 4,040 bbls.; General Petroleum Corp. No. 6 Harbor, 5,535 bbls. and No. 2 S. P. flowing 5,005 bbls. daily. All are producing from both the upper and lower Terminal zones simultaneously. The upper Terminal is flowing through the casing and the lower through tubing. General Petroleum Corp. heads the production list in the Wilmington field with a daily production of 23,177 bbls. followed by Union Pacific Railroad with 21,040 bbls., Bankline Oil Co. with 13,765 bbls., Royalty Service Corp. with 6,478 bbls. and Superior Oil Co. with 6,239 bbls. daily.

Good Well in Newhall

Barnsdall Oil Co. definitely proved up its Newhall field of Los Angeles Basin by completing No. 2 Rancho San Francisco flowing 1,660 bbls. of clean 33.1-gravity oil and 1,100,000 feet of gas per day from 6,712 feet. Barnsdall Oil Co. discovered this field early in 1937, but the initial well, No. 1 Rancho San Francisco in section 26-4-17, completed flowing 400 bbls. of 34.1-gravity oil and 3,000,000 feet of gas per day from 6,472 feet, failed to hold up on sustained production. Completion of No. 2 Rancho San Francisco, however, shows the acreage to be highly productive. The new well, which has been pinched back to 500 bbls. per day, was brought in flowing through a 40/64-inch bean under a tubing pressure of 250 pounds and a casing pressure of 700 pounds after the hole had been finished with 357 feet of 5¾-inch liner including 338 feet of perforated landed on bottom and 6,700 feet of 2½-inch tubing. Barnsdall has No. 3 San Francisco rigged up. Production is being moved by truck and trailer to Los Angeles Harbor, a distance of about 35 miles, as pipe line facilities have not yet been made available. The gas from the new well is very rich but plans for construction of a gasoline plant will await additional development.

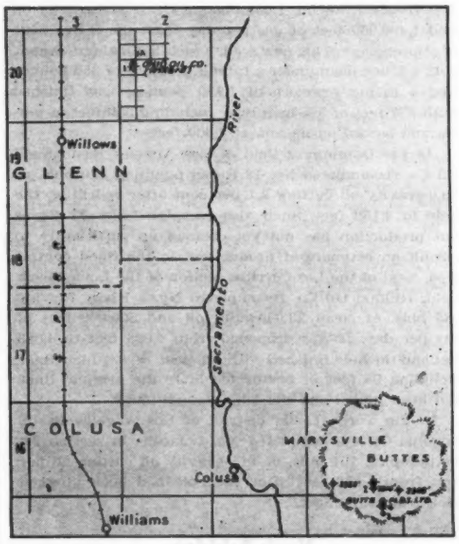
Superior Judge Emmet H. Wilson in Los Angeles has dissolved a temporary restraining order designed to prevent the municipality of Long Beach from either drilling or leasing city-owned property for drilling. The restraining order was issued a short time ago at the request of C. E. Dayton, a taxpayer, who declared the tidelands in question were the property of the state and not of any persons, corporation or municipality. Judge Wilson in dissolving the temporary restraining order set trial of Dayton's request for a permanent injunction for February 18, at which time the state's suits are expected to be determined. In San Francisco, the State Supreme Court has agreed to hear and decide at the earliest possible time the question whether the state or the city of Long Beach owns the tidelands in both the Long Beach Harbor district and the Los Angeles Harbor district.

Wilmington

The Los Angeles city council is contemplating action in the immediate future whereby existing ordinances will be changed to permit drilling operations in the extreme west end of the Wilmington field unless some serious objection arises. At the present time no wells have been drilled west of Avalon Street either north or south of Anaheim Boulevard and it may be several days before the matter is finally settled.

The litigation that has resulted from the dispute involving title to tidelands has seriously retarded drilling operations in the Long Beach section of the Wilmington field and instead of having 50 strings of tools in operation there are only a few working near the Harbor Channel. Pipe line companies have not yet made any attempt to force operators to impound a part of the money received, nor declined to accept oil from tideland areas, but may do so in the near future unless the matter is straightened out. Six new wells were completed in the Wilmington field during the past week, but only one showed large production. This was Hancock Oil Co. No. 1-A Harbor, completed flowing 3,840 bbls. of clean 26.3-gravity oil daily from 3,900 feet after the hole had been finished with an 8⅝-inch liner carrying perforations at 2,350-2,678 feet and 2,876-3,900 feet and cemented through perforations at 2,867 feet. The Caminol Co., Ltd., completed No. 1-6 Harbor flowing 490 bbls. of 16.3-gravity oil daily from the Ranger zone at 3,050 feet after finishing the hole with 542 feet of 8⅝-inch liner including 482 feet of 60-mesh perforations. This well is the largest producer finished in the Ranger zone up to date. Richfield Oil Corp. completed its first well on the Proctor & Gamble acreage when No. 2 P. & G. was brought in pumping 148 bbls. of 17.4-gravity oil daily from the Ranger zone at 3,119 feet.

Superior Oil Co. completed No. 5 Back-Bay, flowing 458 bbls. daily from the Ranger zone and in the older section of the field Colter & McAdoo completed No. 4 Harbor flowing 310 bbls. of 16.7-gravity oil per day from 3,646 feet through a 20/64-inch bean.



Ohio Oil Co. is believed to have found a new dry gas field in Glenn County, California, a few miles northeast of the town of Willows. The initial well blew out and was destroyed but the company has started a new test on the Willard property

Kettleman Hills

In the Kettleman North Dome field Superior Oil Co. made a formation test of No. 5 Huffman but recovered only 252 bbls. of oil and about 9,000,000 feet of gas. This test of the Eocene was made with the bottom of the hole at 10,746 feet and after landing 692 feet of 4¾-inch aluminum liner including 415 feet of perforated, landed at 10,734 feet and cemented through perforations at 10,319 feet. Kettleman North Dome Association No. 4-18-J, bottomed in the Eocene, also proved disappointing as it flowed hot salt water with the hole bottomed at 11,746 feet but plugged back to 10,810 feet. This test was made after the crew had run in a full string of 4¾-inch and screwed onto the 4¾-inch liner which had previously been cemented through perforations at 10,770-10,862 feet. This was a test of the lower part of the Avenal zone, and commercial production may be anticipated above 10,733 feet from which depth the well flowed 1,212 bbls. per day early last year before it was carried down for a deep test. Kettleman North Dome Association completed No. 38-12-P in section 12-22-17 flowing 617 bbls. of relatively clean 36.8-

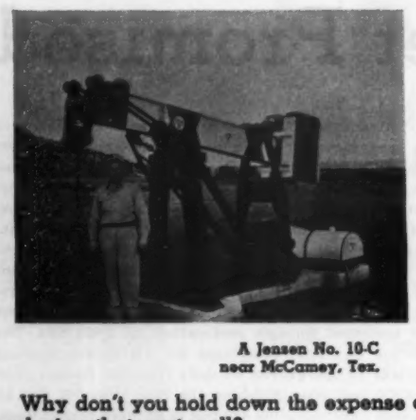
TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	February 4		January 28			
Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	.....	70,808
Gasoline	.....	.....	74,960	10,709	263,604	79,106
Kerosene	.....	.....	.....	.....	59,885	.....
Foreign exports:						
Crude oil	78,075	82,582	406,914	58,131	2,113,533	661,095
Fuel oil	143,967	20,567	.....	.....	419,840	1,350,988
Diesel and gas oil	41,789	5,970	.....	.....	327,433	927,304
Gasoline	20,906	2,987	151,472	21,639	423,478	508,239
Kerosene	.....	.....	.....	.....	122,026	402,049
Coastwise-domestic:						
Crude oil	149,432	21,347	134,448	19,207	808,193	649,359
Fuel oil	212,596	30,371	217,589	31,084	1,456,160	1,178,196
Diesel and gas oil	8,449	1,207	33,198	4,743	163,103	62,711
Gasoline	284,977	40,711	245,094	36,442	1,521,267	1,091,918
Kerosene	8,996	1,285	.....	.....	27,073	2,199

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	178,662	25,523	178,662	75,895
Foreign exports:						
Crude oil	.....	.....	90,270	12,896	336,219	244,600
Fuel oil	.....	.....	.....	.....	26,031	127,960
Diesel and gas oil	.....	.....	.....	.....	98,893	322,233
Gasoline	.....	.....	72,351	10,336	138,473	513,969
Kerosene	.....	.....	30,723	4,389	70,666	66,837
Lubricants	.....	.....	.....	.....	.....	25,353
Coastwise-domestic:						
Fuel oil	112,606	16,087	169,255	24,179	732,296	423,602
Diesel and gas oil	32,588	4,655	45,148	6,450	193,668	58,124
Gasoline	96,722	13,817	110,857	15,837	777,847	425,208
Kerosene	20,511	2,930	19,607	2,801	99,676	3,367

Produce That Well For Less!



A Jensen No. 10-C near McCamey, Tex.

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Very little power is required. You can counter-balance the load to a gnat's eyebrow.

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gravity oil and 690,000 feet of gas per day from the Temblor at 8,080 feet.

Fruitvale

California Western Oil Co. extended the proven limits of the Fruitvale field, completing No. 1 Kern County Land, an outpost in section 14-29-27, pumping 145 bbls. of 20.8-gravity oil daily from 3,511 feet, plugged back from 3,551 feet to the completion depth and finished with 118 feet of 6⅝-inch liner including 114 feet of 130-mesh screen landed at 3,511 feet. Western Gulf Oil Co. completed No. 32-B Kern County Land, flowing 481 bbls. of 17.4-gravity oil daily through a 30/64-inch bean. It was completed at 3,034 feet and finished with 74 feet of 6⅝-inch liner including 37 feet of 200-mesh screen landed at 3,032 feet. Fourteen derricks were either blown over or damaged in the Fruitvale and Kern Front areas a few days ago by a heavy seasonal wind.

Rosecrans

Barnsdall Oil Co. No. 19 O'Dea, in the Rosecrans field, was finished flowing 1,058 bbls. of clean 33.6-gravity oil and 1,490,000 feet of gas per day from the O'Dea zone of Miocene age. This new well, which is flowing through a 42/64-inch bean under a tubing pressure of 350 pounds and a casing pressure of 1,170 pounds, was finished with 377 feet of 5¾-inch liner including 350 feet of perforated landed on bottom at 7,600 feet.

In the Dominguez field of Los Angeles Basin Shell Oil Co. recompleted No. 18 Reyes pumping 120 bbls. of 28.6-gravity oil cutting 2.1 per cent after redrilling the hole to 4,150 feet. Shell also completed No. 93 Reyes but production has not yet cleaned up sufficiently to permit an estimate of production. In the flood control area, west of the Los Cerritos section of the Long Beach field, Hilldon Oil Co. recompleted No. 1 Bixby flowing 685 bbls. of clean 23.9-gravity oil and 500,000 feet of gas per day. It was deepened from 4,038 feet to 4,085 feet and the hole finished with 123 feet of 6⅝-inch liner including 98 feet of perforated after the original liner had been pulled and the hole reconditioned.

In the Yorba Linda district of Los Angeles Basin, Angelus Oil Co. completed No. 1 Jacobs in section 22-3-9 pumping 107 bbls. of 14.9-gravity oil cutting 20 per cent from 1,676 feet after the hole had been plugged back from 1,691 feet.

North Belridge

Belridge Oil Co. in the North Belridge field of Kern County completed No. 28-1 in section 28-27-20 flowing 1,415 bbls. of clean 29.9-gravity oil and 1,200,000 feet of gas per day from the Wagonwheel zone. It was bottomed at 8,450 feet and finished with 476 feet of 4¾-inch liner including 435 feet of 250-mesh screen landed on bottom. Belridge Oil Co. No. 61, in section 27-27-20, completed last week flowing 120 bbls. daily from 8,750 feet, is at the present time flowing 230 bbls. of 34.5-gravity oil and 1,843,000 feet of gas per day. It is showing some water.

Kern County

Hogan Petroleum Co., in the Mountain View field, completed No. 5 Symons-C.C.M.O. in section 4-31-29, flowing 220 bbls. of relatively clean 22.7-gravity oil daily through a 26/64-inch bean. It was completed at 6,172 feet and finished with 181 feet of 5¾-inch liner carrying perforations at 6,090-6,161 feet. The Texas Co. is abandoning No. 1 Bastain in this field as a duster at 4,620 feet. Top of the basement was logged at 4,610 feet, top of the Walker zone at 4,230 feet and top of the Wharton zone at 4,165 feet.

In the Round Mountain field of Kern County Tampico Petroleum Co. completed No. 5 B. & G. pumping 296 bbls. of 16.1-gravity oil cutting 5 per cent from 1,848 feet. This new well was finished with 39 feet of 7-inch liner including 22 feet of 80-mesh landed at 1,847 feet.

In the Elk Hills field Richfield Oil Corp. completed No. 1-D-A in section 1-31-24, pumping 30 bbls. of 20.7-gravity oil cutting 50 per cent from 3,025 feet.

World's Deepest Well

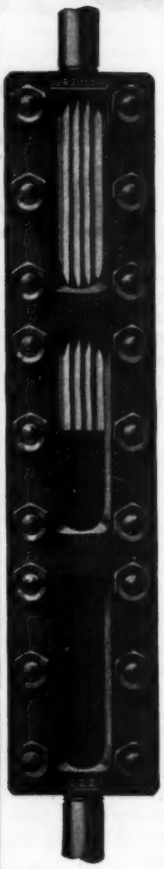
In the Wasco district of Kern County, Continental Oil Co. has reached a depth of 13,122 feet in No. 2-A Kern County Land, a wildcat in section 8-27-24, but will continue drilling operations until a depth of approximately 13,300 feet is reached, at which point it expects to top the Rio Bravo zone.

Santa Maria Valley

In the Santa Maria Valley field Pacific Western Oil

(Continued on Page 108)

JERGUSON



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POMONA TURBINE PUMPS

Central West

By STAFF CORRESPONDENT

Richland County Well Flows 2,412 Bbls. in 30-Hour Test

MATTOON, Ill., Feb. 14.—A 2,162-bbl. well in Richland County, not yet completed, was the banner well of the week in the Central Illinois Basin. Nine wells were completed, four of which were dry. A small well was completed in Vigo County, Indiana, and dry holes were reported in Gibson and Pike counties in the Hoosier state.

Work in the Illinois field has been slowed down by bad roads, caused by rain. Travel on Illinois roads that are not paved is as bad in wet weather as it is in eastern Texas under similar conditions. Very little new work was started last week.

Group Oil Co.'s Jolliff school lot well in the extreme SE cor. SW SW section 1-1n-1w, Clinton County, reported last week in sand at 1,371-74 feet, was completed, pumping 130 bbls. of oil the first 24 hours. It was not shot or acidized. The well was drilled on a very small plat of ground.

Dee and Carter's wildcat in Jefferson County, No. 1 Harvey Hamilton, NE cor. SW NW section 20-4s-3e, was dry and abandoned at 2,911 feet. There was a small showing of oil in the McClosky lime at 2,908-11 feet.

Helmerich & Payne completed a failure in No. 1 Stephens, SW SW SW section 35-3n-4e, Marion County. McClosky lime was penetrated at 2,617-19 feet and the hole was abandoned at 2,765 feet.

B. C. Morrison's test in Wayne County, No. 1 Gibbs, CNL section 14-1n-9e, was abandoned at 3,273 feet. It was dry all the way.

Kirk Holland completed a 5-bbl. pumper in No. 1 Rogier, SE cor. NW NE SW section 28-4n-1e, Marion County, in Benoist sand at 1,432-40 feet.

Pure Oil Co. No. 4 A. Travis, NW NE NW section 33-3n-8e, Clay County, flowed 116 bbls. the first seven hours from pay at 2,972-81 feet, total depth 3,000 feet but after it was acidized with 5,000 gallons flowed 917 bbls. in 24 hours, and was completed.

Pure Oil Co. No. 1 C. C. Cammon (formerly reported as No. 1 Willie Montgomery), SE cor. NW SW NE section 17-3n-9e, Richland County, had pay at 2,952-60 feet and 2,970-75 feet, and flowed 442 bbls. in 24 hours. It was completed.

Bur-Kan Oil Co. and others No. 1 Allen, C SW NW section 27-4n-10e, a wildcat in Richland County, with pay at 3,036-41 feet, was acidized, and swabbed 660 bbls. through casing in 24 hours. It swabbed 2,233 bbls. in six days, declining to 323 bbls. on the sixth day.

The Hoffman test, No. 1 King, SW cor. NW NW section 20-8n-10e, Jasper County, was dry and abandoned at 4,139 feet. Formation tops in this deep test were, Tar Springs at 1,995 feet, with a small showing of oil; Glen Dean at 2,095 feet; Ste. Genevieve lime at 2,518 feet; Roseclaire at 2,552 feet; McClosky at 2,562 feet; Chattanooga at 3,870 feet; Devonian at 4,022 feet, total depth 4,139 feet.

Among the Drilling Wells

In Clinton County, Shell Petroleum Corp. has rig up for No. 1 Randolph Koalmel, 220 feet from south and 1,100 feet from west lines of SW quarter section 1-1n-1w, and was drilling at 675 feet in No. 1 Mary Pitchford, NE NW SW section 1-1n-1w. Adams Oil & Gas Co. No. 3 Schmitz, NW NE SE section 2-1n-1w, has sand at 1,327½-48 feet. Casing was set and the crew was drilling plug, using standard tools to finish. Same company's No. 4 Schmitz, NE NE SE section 2-1n-1w, was drilling at 690 feet. Shell Petroleum Corp. No. 3 Criley, SW NE NE section 2-1n-1w, had Benoist sand at 1,339-70 feet and made an initial production of 95 bbls., and three days later pumped 77 bbls. in 20 hours. It was not completed. Noll and Connery No. 1 Barth, NW SE SW section 12-1n-1w, had Benoist sand at 1,373-93 feet. It was shot with 10 quarts, and the crew was cleaning out. Thompson & Self No. 1 Hanseman, NW cor. SE NW NE section 12-1n-1w, was drilling at 430 feet. Adams Oil & Gas Co. No. 1 Hefter heirs, NW cor. NE SW NE section 13-1n-1w, flowed 18 bbls. in four hours from Benoist sand at 1,350-70 feet, and was being swabbed through tubing. Henshaw & Whisenart No. 1 Cox, NW cor. SW SW section 13-1n-1w, was rigged up to start. It is a rotary test. Brookside Oil & Gas Co. was drilling at 900 feet in No. 1 Dodillett, SE SW NE section 21-1n-1w (corrected location). Lilly and others were fishing at 570 feet in No. 1 Siegler, NW cor. NE NE SE section 12-1n-1w. Holle & Willis No. 1 Hughes estate, C N half NE NW section 18-3n-2w, was drilling at 1,248 feet.

In Bond County, W. C. McBride, Inc., No. 1 Butler, SW SW SE section 30-4n-2w, was drilling at 965 feet.

In Montgomery County, Bill Cassidy (formerly Schlossberg & Sigel) No. 1 Nieman, C SE SW section 29-8n-5w, had a small showing of oil at 680-717 feet, and an odor of sulfur water at 847 feet which caused the owner to plug back to 717 feet. The showing will be shot.

In Clark County, M. V. Yeager No. 1 Robinson, SE SW NW section 17-10n-11w (measuring from Indiana principal meridian), was drilling at 2,449 feet, 3 feet in the Devonian.

In Massac County, Kahle and others were drilling at 2,860 feet in No. 1 Harvick, SW SW SW section 23-14s-3e.

In Saline County, C. F. Bolton and others No. 1 Beagle, NW cor. NE section 13-9s-7e, was drilling at 1,830 feet. It penetrated sand at 1,542-70 feet which had a small showing of dead oil, and had showings at 1,780-96 feet and 1,804-29 feet, and was drilling at 1,830 feet.

In Jefferson County, Nollem & Benoist No. 1 Kelly, NE NW NE section 25-4s-2e, was at a total depth of 2,454 feet, and the crew was underreaming 6-inch casing. Carter Oil Co. No. 1 Doughitt, C E half NE SE section 9-1s-2e, was drilling at 840 feet.

In Edwards County, Leach Brothers No. 1 A. D. Lee, SW NE SE section 11-1s-10e, was drilling at 3,055 feet.

In Marion County, W. C. McBride, Inc., No. 1 Clow, SW SW SE section 29-2n-1e, was awaiting pipe at a total depth of 1,775 feet. W. D. Sheddon was moving in rotary to start No. 1 Pawlica, SW NE SW section 33-2n-1e. Mahutska Oil Co. No. 1 Nichols, CEL SW SE section 12-4n-4e, is having mechanical trouble, with the test at a total depth of 2,880 feet.

In Jackson County, Stanolind Oil & Gas Co. No. 1 Leiner, NE NW SW section 20-7s-4w, was drilling at 2,774 feet, in chert and lime.

In Randolph County, Mabee Consolidated Corp. and others No. 1 Wilson, NE SE NE section 3-4s-5w, was drilling at 3,390 feet, with the top of the Trenton lime at 3,150 feet.

In Washington County, Bitterman No. 1 Jesse, C SE NE section 16-3s-2w, was drilling at 380 feet.

In Fayette County, Carter Oil Co. made location for No. 1 Bartimus, C W half SE NE section 15-8n-3e, and for No. 2 A. Clow, C W half SW NE section 15-8n-3e. Carter Oil Co. No. 1 F. R. Dove, C E half NW SE section 15-8n-3e, was coring at 1,512 feet. Cypress sand was topped at 1,370 feet, and there was saturation at intervals from 1,397 to 1,494 feet. John Farelly No. 1 Lilly, SE cor. SW SE section 11-8n-3e, was at a total depth of 1,334 feet, with the crew trying to shut off water.

In Wayne County, Kenova Petroleum Co. was drilling at 420 feet in No. 1 Bright, NE NE NE section 21-1n-5e.

In Clay County, Pure Oil Co. No. 1 Mitchell, C N half SE SE section 5-2n-8e, was drilling at 2,175 feet. Vermilion Oil Co. No. 1 J. B. Smith, 173.9 feet from east and 1,177.5 feet from south lines of NE quarter section 20-3n-8e (corrected location), was drilling at 2,203 feet.

Big Well in Richland County

In Richland County, Mammoth Producing & Refining Co. No. 1 Bell, NW NE SW section 28-3n-9e, had pay in oolitic lime at 3,057-60 feet, total depth. It flowed 250 bbls. in 2½ hours and 2,412 bbls. in 30 hours. The first 24-hour production was estimated at 2,162 bbls. It was not yet completed. Papoose Oil Co. No. 1 Lynch, SW SW NE section 5-3n-10e, was at a total depth of 3,124 feet with no oil showing, but with water in the bottom of the hole.

Pure Oil Co. was drilling at 1,900 feet in No. 1 C. T. Montgomery B, C E half SE NW section 4-3n-9e; drilling at 500 feet in No. 2 on the same property, C W half SW NW section 4; drilling at 2,780 feet in No. 1 Hundley, SE SE NE section 5-3n-9e; drilling at 1,800 feet in No. 8 Palmer-Taylor, NW NE SE section 5-3n-9e; drilling at 2,285 feet in No. 12 J. O. Coen, C W half SW NW section 9-3n-9e, and drilling at 2,350 feet in No. 3 Frost, C W half NW SW section 9-3n-9e. Ohio Oil Co. No. 9 Arbuthnot, C W half SW NE section 8-3n-9e, was at a total depth of 2,973 feet, with 7-inch casing set as 2,925 feet. It found top of the Ste. Genevieve lime at 2,910 feet and saturation at 2,946-65 feet. Max Pray No. 1 Runyon, SW SW SE section 21-3n-9e, has 600 feet of oil in the hole at a total depth of 3,121 feet. The hole is being cleaned out to the bottom.

Indiana Operations

Carter Oil Co. completed a small producer in Vigo County, Indiana, in No. 2 Drake, C N half SW NW section 15-10n-10w. Devonian was topped at 2,117 feet and pay was found at 2,121-25 feet. The hole was drilled to 2,145 feet and plugged back to 2,133 feet. It made 33 bbls. of oil the first day, but when acidized with 2,000 gallons responded with 28 bbls. of oil and 50 bbls. of water in 20 hours. Same company made a location for No. 1 Paddock, C S half NE NE section 16-10-10w. Carter Oil Co. was coring at 2,775 feet in No. 1 Lindley, C E half SE SW section 13-8n-11w, in Sullivan County.

Ben Ruble was drilling at 400 feet in No. 1 Lydia Brewer heirs, CWL SE SE SW section 33-3n-5w, in Daviess County.

In Pike County, Murphy Oil Co. No. 3 Essie Stewart, CSL NW NW NW section 17-1n-9w, was running 5-inch casing to 1,324 feet. C. L. Trussler No. 1 Barrett, SE SW SE section 26-1n-7w, had Mississippi lime at 1,133 feet, total depth 1,203½ feet, and will set 5-inch casing on bottom.

In Gibson County, Midwest Development Co. No. 1 Thompson, SE cor. Donation 109, Township 1s-10w, was abandoned at 1,815 feet with the hole full of water. Big 4 Oil Co. No. 6 Hope, SE cor. NE SW SE section 18-1s-9w, was drilling at 1,470 feet. Same company's No. 6 Campbell, SW NW NW section 5-1s-9w, Pike County, was a hole full of water at 844-60 feet, and was abandoned.

In Posey County, Nickel & Nelson No. 1 Aldridge, SE cor. NE NE SW section 1-5s-13w, had a hole full of water at 2,204 feet, total depth 2,241 feet, and the crew was underreaming the 6⅝-inch casing.

OHIO

FINDLAY, Ohio, Feb. 14.—In the Central Ohio gas fields 10 gas wells and 2 dry holes were completed during the past week.

In Ashland County, Hanover Township, Ohio Fuel Gas Co. No. 2 S. E. Fritz, section 14, made 196,000 feet of gas from the Clinton sand at 2,900-06 feet.

In Athens County, Ames Township, D. T. Orndoff No. 1 C. H. Wooley, Fraction 35, is good for 74,000

feet of gas from the Second Berea at 1,417-32 feet. In Carthage Township, Ohio Fuel Gas Co. No. 3 F. I. Caldwell, Fraction 3, made 317,000 feet of gas from the Second Cow Run sand at 894 feet.

In Knox County, Milford Township, C. O. Moore No. 1 Deborah Speelman, Lot 13, fourth quarter, gauged 40,000 feet of gas from the Clinton sand at 2,135 feet.

In Licking County, Mary Ann Township, Rutlege and others No. 1 T. F. Davis, Lot 19, first quarter, had 58,000 feet of gas from the Berea at 831-43 feet.

In Monroe County, Sunsbury Township, Kreamor and others No. 1 Jacob Haren, section 15, made 400,000 feet of gas from the Injun sand at 1,610-15 feet.

In Morgan County, Union Township, A. T. Pettit & Co. No. 1 G. E. Vanhorn, section 19, was drilled to 2,275 feet and abandoned.

In Muskingum County, Brush Creek Township, Gas Producing Co. No. 3 S. M. Swingle, section 23, was good for 625,000 feet of gas from the Clinton sand at 4,038-78 feet.

In Richland County, Mifflin Township, Harmon & George No. 1 Lulu Schnan, section 21, had a good flow of gas from the Clinton at 2,468-83 feet.

In Stark County, Plain Township, Lyons and others No. 1 N. A. Dickes, section 23, started with 1,770,000 feet of gas from Clinton sand at 4,612-70 feet.

In Summit County, Green Township, McCoy and others No. 1 Ida Koontz, section 33, found the Clinton sand dry at 4,248-61 feet; total depth 4,320 feet.

In Vinton County, Clinton Township, Kelch Brothers No. 1 Everett Webb, section 19, is good for 40,000 feet of gas from the Hamden sand at 690-707 feet.

Lima Field

The wildcat test of the Midwest Development Co. on the Archibald Peterson tract, in Green County, Miami Township, section 19, was drilled through the St. Peter formation to a total depth of 1,900 feet. Shows of oil were found in the Trenton formation at 1,198 feet and 1,460 feet. The oil showing at 1,460 feet was shot with 80 quarts and, due to the water which collected in the hole, it will be necessary to install pumping equipment before further tests can be made.

In Sandusky County, Jackson Township, Trent Oil Co. No. 1 F. W. Havens, section 15, made 70,000 feet of gas per day from the Trenton sand at 1,341 feet.

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WESTERN KENTUCKY

OWENSBORO, Ky., Feb. 14.—Fourteen new operations were reported in the Western Kentucky fields in the past week but only two completions, a 10-bbl. well and a shallow dry hole. The report by counties follows:

Breckenridge County, Cloverport district: Flesher, Galey, and others No. 4 Murray Tile Co., a deep test, is drilling at 630 feet, in a break in the Mississippi lime; Blue Lick water.

Hancock County, Lyonia district: W. W. Damron No. 1 Ben Jackson is rigging up.

Logan County, 1½ miles south of Dunmore: Kersey and others No. 1 Richard Adler is rigging up.

McLean County, North Livermore district: J. C. Miller, trustee, No. 8 Mrs. Fannie Foley is spudding. Jack Cox and others No. 2 D. A. Bennett, spudding in. Sunflower Oil & Gas Co. No. 1 Crowe Brothers, location.

Muhlenberg County, Paradise district: South-Penn Oil Co. No. 2 Rogers-Crescent Coal Co., deep test, is drilling at 785 feet.

Ohio County, Fordsville district: Joe Hatfield and others No. 4 Mrs. Cobb heirs is rigging up. The Petroleum Co. No. 3 Leander Showen, location. Snowden & McSweeney No. 22 J. W. Peckinpaugh is a 10-bbl. well in Jett sand. Cumberland Petroleum Co. and others No. 1 Joint Line, a deep test, is drilling at 863 feet in Mississippi lime, with the hole full of water. Dundee district: Boyd Patrick No. 1 Nelson Cole is spudding in. Sunnydale district: Western Kentucky Petroleum Corp. No. 2 F. M. Mosley was a dry hole through Bethel sand, total depth 997 feet.

Todd County, 1 mile east of Fairview: I. A. Polhamus No. 1 J. W. Hall is underreaming at 400 feet.

Webster County, Sebree district: Koker & Sellers No. 2 E. M. Light is a location.

EASTERN KENTUCKY

ASHLAND, Ky., Feb. 14.—Completions reported in the past week touched a new high for the year. Thirteen gas wells and five oil wells are reported with three dry holes.

Two of the gas wells are exceptionally good producers and one of the oil wells made 61 bbls. the first 24 hours. Operator Hamilton completed No. 76-D on the James Hatcher land on Ivy Creek in Floyd County, and the well gauged 2,957,000 feet of gas the first 24 hours, total depth 1,678½ feet, in Maxon sand.

Fred Williams No. 1 on Mrs. Woods land at Betsy Layne in Floyd County, total depth 1,510 feet, in Big lime, started with 2,000,000 feet of gas per day. Stephens and others completed No. 1 Caldwell & Layne on Toms Creek in Floyd County at 1,542 feet, in Big lime. The well made 61 bbls. of oil the first 24 hours.

The other complete operations, by counties, are as follows:

In Knott County, Warfield Natural Gas Co. No. 4,772, John A. Jones land, Calhoun Branch, dry and abandoned. Southeast Gas Co. No. 2 Combs & Allen, Jones Fork, total depth 2,794 feet, 700,000 feet of gas per day. Hamilton No. 14-E Mose Miller, Perkins Branch, total depth 2,860 feet, 244,000 feet of gas per day.

In Floyd County, United Carbon Co. No. 4 T. B. Williamson, Levisa Fork, total depth 2,608 feet, 8 bbls. of oil and 67,000 feet of gas per day. Fred Williams No. 5 Stanley heirs, Levisa Fork, total depth 2,790 feet, 100,000 feet of gas per day; same operator's No. 2 Honaker, Camp Branch, dry and abandoned; same operator's No. 3 on same land, 400,000 feet of gas, no depth given. J. A. Allen and others No. 1 Collins, Home Branch, 200,000 feet of gas per day, no depth given. Kentucky-West Virginia Gas Co. No 563 on the H. H. Smith farm, near the mouth of Camp Branch, Levisa Fork, total depth 1,951 feet, Maxon sand, 528,000 feet of gas per day.

In Martin County, Kentucky-West Virginia Gas Co. No. 12 C. W. Preece, Peg Fork of Coldwater, was dry and abandoned. Virginian Oil & Gas Co. No. 2 B-1,259 on Big Crooked made 30 bbls. of oil the first 24 hours from Maxon sand, total depth 1,506 feet. Hale and others No. 1 Hardin at Ashlog, total depth 2,803 feet, produced 300,000 feet of gas the first 24 hours.

In Magoffin County, Jenkins No. 1 John Adams, on Short Fork, total depth 1,168 feet, started at 6 bbls. per day. It had not been shot. Jenkins & Evans No. 1 Josephine Howard on Licking River was dry and abandoned. No depth given.

In Powell County, Mrs. Agatha Wireman No. 24 Townsend on South Fork in South Fork district was a dry hole, total depth not given.

(Continued on Page 108)

Rocky Mountain Area

By
T. R. INGRAM

N. W. New Mexico Shallow Fields May Get Deep Tests

DENVER, Colo., Feb. 14.—Gulf Oil Corp.'s eastern Colorado deep wildcat will run casing to the top of the oil showing at 4,808 feet, and test. Considerable leasing far out from the well is reported under way. The Continental Oil Co. will drill a Pennsylvanian test in Prowers County.

Wyoming had two completions in the Middle Baxter Basin district, one a 3,000,000-foot gasser and the other a dry hole.

Nearly all Montana drilling wells are shut down. Santa Rita Oil & Gas Co. made an important location west of its No. 1 Lander, the record producer for the Cut Bank field.

Northwest New Mexico may have several deep wells drilled to the Pennsylvanian in the near future.

NEW MEXICO

A southern Eddy County wildcat attracted attention the past week when it produced an estimated 1,000,000 feet of sweet gas daily from Delaware horizon. It was W. O. Snyder No. 1 Pecos Irrigation Co., C NE SE section 15-25-28, in the Delaware Basin region, northeast of the village of Red Bluff. Gas flow was through tubing set at 3,138 feet, total depth, with packer set at 3,052 feet. Delaware black lime was topped at 2,555 feet, Delaware sand at 2,580 feet. It had a showing of oil at 2,830-40 feet, with gas coming in at 3,100 feet in a lime break. Water stood 3,100 feet in the hole, coming from undetermined source but thought to be from upper zones, as 5½-inch casing set at 2,817 feet was pulled when it appeared cement was not holding, leaving the hole open.

Winston Marks has spudded in a wildcat in SE NE section 5-25n-24, in Colfax County, northeastern New Mexico. It is on the east rim of the Raton coal basin, in a general area carrying several oil and gas seeps. Location is on a local structure mapped by the late Charles T. Lupton, and is on a 15,000-acre block.

The South Eunice district in Lea County was extended one-fourth mile southwest at Cities Service Oil Co. No. 2-A Clossen, C SE NE section 18-22-36. It was completed for 2,928 bbls. of oil daily, flowing 140 bbls. of oil the first hour and averaging 122 bbls. an hour through tubing. It had pay at 3,760 feet, total depth 3,805 feet.

Another producer was added in the Vacuum district, Lea County, at Magnolia Petroleum Co. No. 3 State-Bridges, C NW SW section 23-17-34. It had initial yield of 295 bbls. of oil naturally in 24 hours, flowing through choke. Total depth was 4,551 feet. Other Lea County completions:

Gulf Oil Corp. No. 2 Elliott, C NE SE sec. 15-25-37, Jal area, was bottomed at 3,435 feet, and flowed 204 bbls. of oil daily through tubing, accompanied by 1,124,000 feet of gas.

Same operator's No. 2 Stebbins, C SW NW section 5-22-37, flowed 120 bbls. of oil daily, with 502,000 feet of gas, at total depth of 3,770 feet in lime.

Plains Production Co. No. 2 Moseley, SW NE SE section 34-24-37, flowed 52 bbls. of oil daily at 3,470 feet, total depth.

Skelly Oil Co. No. 5 G. W. Sims, C SE NW section 10-23-37, total depth 3,630 feet, flowed 360 bbls. of oil daily through tubing, with 500,000 feet of gas.

Sun Oil Co. No. 2 Lanehart, C NE SE section 20-25-37, total depth 3,620 feet, plugged back to 3,235 feet and flowed 20 bbls. of oil daily, with 1,630,000 feet of gas.

Dalport Oil Corp. No. 1 Leonard, C SE NW section 29-26-38, wildcat, was reported abandoned at 3,706 feet, total depth.

Completions in Eddy County were: Repollo Oil Co. No. 1-A Park, NW NE NE section 22-17-30, Jackson area. It was acidized and flowed 440 bbls. of oil daily at 3,450 feet, total depth.

Franklin Petroleum Corp. No. 1 McIntyre, NE NW SW section 20-17-30, was bottomed at 3,270 feet, acidized and had initial production of 135 bbls. of oil daily.

George F. Getty, Inc. No. 1-E State, NE SW SW section 16-17-31, flowed 145 bbls. of oil daily after acidizing at 3,567 feet, total depth.

Nicholas and others No. 1-X Johnson, SW NE section 35-16-31, total depth 3,940 feet, had initial production of 303 bbls. of oil.

In Curry County, Bond & Harrison No. 1 Hart ranch, C NW SE section 13-2n-31, wildcat, was reported abandoned at 3,258 feet, total depth.

Lea County

Amerada Pet. Corp. No. 6 Byrd, SE sec. 12-20-36. Loc.
Amerada Pet. Corp. No. 2 Corrigan, C S½ SE NE sec. 4-22-37. T.D. 3,822 ft.; P.B. 3,771 ft.; tstg.
Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. T.D. 2,585 ft.; set 8-in. 2,573 ft.
Anderson-Prichard Oil Corp. No. 1 Carlson, C SW NW sec. 21-25-37. O.W.D.D.; to deepen.
Anderson-Prichard Oil Corp. No. 1 Harrison, SW cor. sec. 23-25-37. T.D. 1,205 ft.; S.D.
Anderson-Prichard Oil Corp. No. 2 Jal, C NW NE sec. 8-25-37. Drlg. 2,300 ft.
Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-27-37. Drlg. 3,610 ft.
Anderson-Prichard Oil Corp. No. 2 Langlie, SE sec. 8-25-37. Drlg. 3,325 ft.
Barnsdall Oil Co. No. 2 J. Whitten, SE NE SE sec. 33-23-36. T.D. 3,550 ft.; set 7-in. csg.
Bradley Oil Co. No. 1 Downes, SE NE SE sec. 5-22-37. Loc.
Cities Service Oil Co. No. 1-H State, C NE NE sec. 17-22-36. T.D. 3,884 ft.; prep. to deepen.
Continental Oil Co. No. 1-A-22 Elliott, C SW SW sec. 22-22-37. O.W.D.D.; T.D. 3,592 ft.; swb. 46 B.O.P.D.
Continental Oil Co. No. 3-B-6 Elliott, C SE SE sec. 6-22-37. T.D. 3,778 ft.; F. 104 B.O. in 13 hrs.; tstg.
Continental Oil Co. No. 1-B-9 Elliott, NW sec. 9-22-37. T.D. 3,725 ft.; tstg.
Continental Oil Co. No. 1-A-20 Jack, C NE SE sec. 20-24-37. Drlg. 3,047 ft.
Continental Oil Co. No. 3-B-31 Lockhart, SE sec. 31-21-36. T.D. 3,924 ft.; F. 64 B.O.P.D.
Continental Oil Co. No. 1-A-31 Marsh, SE sec. 31-20-39. Wildcat; T.D. 4,346 ft.; set 5½-in. 4,022 ft.
Continental Oil Co. No. 2-B-23 Reed, NE SE NE sec. 23-20-36. T.D. 256 ft.; set 10¾-in. 251 ft.
Continental Oil Co. No. 1-B-14 Sanderson, NE SW SE sec. 14-20-36. T.D. 258 ft.; set 10¾-in. 249 ft.
Continental Oil Co. No. 3-E-17 State, C NW NW sec. 17-22-36. Drlg. 3,175 ft.
Continental Oil Co. No. 1-F-1 State, C SW SW sec. 1-21-36. Drlg. 2,612 ft.
Cranfill & Germany No. 1 Weir, C NE NE sec. 15-20-37. T.D. 4,210 ft.; S.D.O.
Culbertson & Irwin No. 5-A Humphrey, NE NW SE sec. 3-25-37. Drlg. 2,905 ft.
Culbertson & Irwin No. 7-A Humphrey, NE SW SE sec. 3-25-37. Loc.
Culbertson & Irwin No. 1 Liberty Royalty, NW sec. 3-25-37. T.D. 2,945 ft.; fsg.
J. P. Cusack, Inc. No. 1 Turner, SW NE SE sec. 34-18-38. Cellar and pits.
Danglade & Clower No. 1 Currie, NE NE SW sec. 6-21-37. Cellar and pits.
Danglade & Clower No. 1 Glier, C SW NE sec. 33-22-37. Drlg. 2,578 ft.
L. E. Elliott No. 1 Elliott, NE NE SE sec. 26-20-36. T.D. 3,702 ft.; rng. csg.
Empire O. & R. Co. No. 2-B State, C SE SW sec. 2-21-37. Drlg. 3,875 ft.
A. R. Eppenauer No. 1 Stuart, NW NE NE sec. 22-25-37. R.U.M.
J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 3,700 ft.
Geo. F. Getty No. 1 Riggs, NW sec. 1-26-37. Wildcat; drlg. 2,540 ft.
Geo. F. Getty No. 1-F State, C NE NE sec. 36-17-34. Drlg. 3,900 ft.
Gulf Oil Corp. No. 6-F Bell, C NW SW sec. 36-20-36. Drlg. 3,068 ft.
Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. T.D. 3,681 ft.; tstg.
Gulf Oil Corp. No. 3 Day, SE SE SW sec. 6-22-36. Drlg. 2,825 ft.
Gulf Oil Corp. No. 1 Elliott, SW SE SE sec. 15-25-37. Drlg. 3,420 ft.
Gulf Oil Corp. No. 1 Greer, SW sec. 21-22-36. T.D. 3,842 ft.; tstg.
Gulf Oil Corp. No. 2-D Kutter, C SE SW sec. 8-19-37. Drlg. 1,195 ft.
Gulf Oil Corp. No. 1-D Mattern, SW sec. 6-22-37. T.D. 3,795 ft.; tstg.
Gulf Oil Corp. No. 3 McCormack, C SE SE sec. 32-21-37. T.D. 256 ft.
Gulf Oil Corp. No. 1 LeMunyon, C NE NE sec. 28-23-37. Old well; T.D. 3,666 ft.; P. 3 B.O.P.D.
Gulf Oil Corp. No. 2 Ramsey, C SW SW sec. 27-21-36. Drlg. 1,755 ft.
Gulf Oil Corp. No. 1 Woolworth, C NE SE sec. 30-24-37. T.D. 3,725 ft.; tstg.
Humble O. & R. Co. No. 2 Greenwood, C NE SW sec. 9-22-37. Loc.
Humble O. & R. Co. No. 3 Williams, C SW NW sec. 34-24-37. T.D. 3,532 ft.
Jal Nat. Gas Corp. No. 2 Justis, NE sec. 20-25-37. T.D. 3,029 ft.; tstg.
Kan-Mex Corp. No. 2-B-3 Vaughn, NW cor. sec. 3-24-36. R.U.R.
Carl B. King No. 1-A Stuart, NW NE NW sec. 14-25-37. T.D. 982 ft.; set 7⅝-in. csg.
Harry Leonard No. 1 Ginsberg, NW sec. 29-25-38. Wildcat; T.D. 1,434 ft.; squeeze job.
Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 34-17-34. T.D. 4,905 ft.; P.B. 4,704 ft.
Magnolia Pet. Co. No. 1-H State, C NW NW sec. 31-17-35. Drlg. 3,861 ft.
Magnolia Pet. Co. No. 1-I State, C NW SW sec. 36-17-34. Drlg. 3,705 ft.
Magnolia Pet. Co. No. 2 State-Bridges, sec. 14-17-34. T.D. 4,593 ft.; flw. 51 B.O. in 1 hr., naturally.
J. A. Mascho No. 1 Cloyd, C SE SE sec. 20-22-23. Wildcat; T.D. 3,516 ft.; to set whipstock.
McDowell & Weiner No. 1 Elliott, SE cor. sec. 19-21-37. T.D. 3,821 ft.; C.O.
C. T. McLaughlin No. 1 Polhamus, NE sec. 9-24-37. T.D. 3,672 ft.; S.D.
C. T. McLaughlin No. 1 Imperial Royalties, NW SE NW sec. 9-24-37. T.D. 3,436 ft.; waiting on spudder.
National Drlg. & Prod. Co. No. 1 Flint, C NE NE sec. 29-20-34. Wildcat; drlg. 3,695 ft.
Ohio Oil Co. No. 2 Grizzell, C NW SE sec. 5-22-37. T.D. 600 ft.; prep. to drill in.
Ohio Oil Co. No. 1 Hardy, NE NE SE sec. 20-21-37. T.D. 3,639 ft.; fsg.
Ohio Oil Co. No. 1 Kutter D, C SW SW sec. 18-19-37. Drlg. 3,590 ft.
Ohio Oil Co. No. 4 State-Hansen, C W½ SE NE sec. 16-20-37. Drlg. 3,470 ft.
Ohio Oil Co. No. 7 State-McDonald, C SW SE sec. 16-22-36. T.D. 3,871 ft.; C.O.
Ohio Oil Co. No. 1 State-Warn, C SE NW sec. 21-17-35. Drlg. 3,925 ft.
Lem Peters No. 1 Graham, sec. 27-22-37. Drlg. 3,480 ft.
Parker Drlg. Co. No. 1 Irwin, C W½ SW SW sec. 35-24-37. Drlg. 2,775 ft.
Phillips Pet. Co. and Pure Oil Co. No. 1 Woolworth, C SE NE sec. 33-24-37. Cellar and pits.
Phillips Pet. Co. No. 1 Commissioner, C SW SE sec. 30-17-35. Bldg. drk.
Phillips Pet. Co. No. 1 Santa Fe, C SW NW sec. 31-17-35. Drk.
Plains Prod. Co. No. 1 Humphreys, NE sec. 3-25-37. Loc.
Repollo Oil Co. No. 1 Powhatan Carter, SW SW NE sec. 9-24-37. T.D. 3,705 ft.; P.B. 3,600 ft.; flw. 29 B.O.P.D.; C.O.
Repollo Oil Co. No. 3 Christmas, NW NW NE sec. 28-22-37. T.D. 3,726 ft.; P.B. 3,664 ft.; fsg.
Repollo Oil Co. No. 4 Roach, NW NW SW sec. 21-20-37. T.D. 3,875 ft.; P.B. 2,860 ft.; shot; R.U.S.T.; to C.O.
Repollo Oil Co. No. 4-D Stuart, SW sec. 10-25-37. Drlg. 2,860 ft.
Rowan Drlg. Co. No. 2-A Elliott, C NE SW sec. 27-22-37. Drk.
Samedan Oil Co. No. 5 Hughes, C NE SW sec. 10-23-37. Drlg. 3,500 ft.
Shasta Oil Co. No. 2 Woolworth, NE NW NW sec. 28-24-37. Cellar and pits.
Shell Oil Corp. No. 2 Grizzell, C NE SE sec. 8-22-37. Drlg. 50 ft.
Shell Pet. Corp. No. 1-A State, C NW SE sec. 16-23-36. Drlg. 2,936 ft.
Shell Pet. Corp. No. 4-E State, C SW NW sec. 12-20-36. Drlg. 3,800 ft.
Sindorf et al No. 1 Glier, NE cor. sec. 33-22-37. Drlg. 825 ft.
Skelly Oil Co. No. 5 J. B. Baker, C SE NW sec. 27-22-37. T.D. 3,620 ft.; tstg.
Skelly Oil Co. No. 2 Hill, C NW NE sec. 6-21-37. T.D. 182 ft.; set 10-in. 177 ft.
Skelly Oil Co. No. 3 G. W. Sims, C NW NE sec. 9-23-37. T.D. 3,642 ft.; C.O.
Skelly Oil Co. No. 1-C R. R. Sims, sec. 3-23-37. Drlg. 3,688 ft.
Skelly Oil Co. No. 1-E W. P. Sims, C NW NE sec. 10-23-37. T.D. 3,625 ft.; flwd. 452 bbls. in 24 hrs.
Skelly Oil Co. No. 1-K State, NE NE NW sec. 32-21-37. T.D. 121 ft.; set 15½-in. 117 ft.
Skelly Oil Co. No. 1 Toby, C SW SW sec. 7-24-37. M.I.M.
Stanolind O. & G. Co. No. 2-A Hill, C NE SE sec. 6-21-37. Loc.
Stanolind O. & G. Co. No. 2-C Hill, C SW NW sec. 5-21-37. Drlg. 290 ft.
Stanolind O. & G. Co. No. 3-C Hill, C NW NW sec. 5-21-37. Loc.
Stanolind O. & G. Co. No. 4-B Myers, C SW NW sec. 21-24-37. T.D. 1,285 ft.; rng. csg.
W. H. Street No. 3 Woods, C NW NE sec. 22-22-37. Drlg. 3,680 ft.
Texas Co. No. 1 Corbin, C NW SW sec. 19-18-33. T.D. 4,021 ft.; set 7-in. csg.
Texas Co. No. 3 Fristoe, NW SE NE sec. 3-25-37. T.D. 1,080 ft.; straightening hole.
Texas Co. No. 14 Lieu Lands, SW SW NW sec. 19-20-37. Drlg. 2,200 ft.
Texas Co. No. 1-B Moberly, C NE NE sec. 21-26-37. Drlg. 910 ft.
Texas Pacific C. & O. Co. No. 8-A State, Acct. 2, C SE SE sec. 7-22-36. T.D. 3,447 ft.; trying to kill well.
Texas Pacific C. & O. Co. No. 9-A State, Acct. 2, NW SW NE sec. 7-22-36. T.D. 1,484 ft.
Tide Water Associated Oil Co. No. 2 Day, C E½ NW NW sec. 6-22-36. Drlg. 800 ft.
Two States Oil Co. No. 2 Downes, C NE NE sec. 6-22-37. Drlg. 2,715 ft.

Western Gas Co. No. 1 Cowden, SE cor. sec. 30-23-37. T.D. 3,625 ft.; rng. tbg.
Western Gas Co. No. 1 Davis, C SW SE sec. 33-23-37. R.U.R.

Eddy County

F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 2,117 ft.; fsg.
Barnett Oil Dev. Co. No. 1 King Permit, C NW SE sec. 23-26-30. T.D. 938 ft.; S.D.O.
Ed Bryant No. 1 Stebbins, C NE SW sec. 19-20-29. T.D. 1,028 ft.; S.D.O.
Carper Drlg. Co. No. 3 Gissler, C E½ E½ NW sec. 23-17-30. R.U.M.
D. & B. Oil Co. No. 2 Jenkins, SW NW NW sec. 20-17-30. T.D. 3,265 ft.; swbg. 20 B.O.P.D.
D. & B. Oil Co. No. 3 Jenkins, NE NE NW sec. 20-17-30. Loc.
Emperor Oil Co. No. 4 Puckett, C NE NE sec. 24-17-31. T.D. 630 ft.; rng. csg.
Emperor Oil Co. No. 5 Puckett, C SW NE sec. 24-17-31. R.U.S.T.
Finley & Cherry No. 1 Buchley, C NW NW sec. 28-16-31. Wildcat; T.D. 3,750 ft.; S.D.
Flint Prod. Co. No. 1-B State, SE sec. 20-17-30. Drlg. 3,830 ft.
C. J. Frederick No. 1 Reed, C NE SW sec. 28-24-28. T.D. 1,210 ft.; S.D. repairs.
F. W. & Y. Oil Co. No. 8-A Gissler, NE NW NE sec. 23-17-30. Drlg. 1,270 ft.
F. W. & Y. Oil Co. No. 1-B Gissler, SW sec. 15-17-30. T.D. 2,345 ft.; S.D. repairs.
F. W. & Y. Oil Co. No. 2-B Gissler, C NW NW sec. 24-17-30. T.D. 3,505 ft.; swbd. 37 B.O.P.D.; to reacd.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. T.D. 2,953 ft.; fsg.
Grayburg Oil Co. No. 11 Burch, NE NE SE sec. 19-17-30. Drlg. 50 ft.
Grayburg Oil Co. No. 4 Keely, SE SW NE sec. 24-17-9. Drlg. 2,980 ft.
M. A. Grisham No. 1 Chaytor, NE sec. 10-24-26. T.D. 1,967 ft.; S.D.O.
H. A. Hartwell No. 1 Vandagrift, NE NE SE sec. 8-18-27. Drlg. 1,102 ft.
R. L. Holcomb No. 1 State, NW sec. 22-17-28. Drlg. 1,023 ft.
Woodworth Hawkins No. 1 Mack, C SW SW sec. 20-24-27. Drlg. 2,370 ft.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. T.D. 1,495 ft.; S.D. for new rig.
B. M. Koehane et al No. 1 Shannon, SE cor. sec. 27-16-31. Drlg. 420 ft.
Paul Moran No. 1 Crawford & Smith, NW NW SW sec. 24-24-26. R.U.M.
Murchison & Closuit No. 2-A State, NW SE SW sec. 16-17-31. Drlg. 435 ft.
Nash & Windfohr No. 8-A Jackson, sec. 13-17-30. Drlg. 3,425 ft.
Nash-Windfohr & Brown No. 2-B Stevens, NW sec. 13-17-30. Drlg. 3,100 ft.
Pecos Valley Gas Co. No. 1 Sappenfield, C SE SE sec. 4-16-28. T.D. 40 ft.; S.D. for mch.
Repollo Oil Co. No. 3-D McIntyre, SE cor. sec. 17-17-30. T.D. 3,241 ft.; est. 85 B.O.P.D.
Repollo Oil Co. No. 4-D McIntyre, NW NE NE sec. 21-17-30. T.D. 575 ft.; rng. csg.
Repollo Oil Co. No. 1-B Parke, SW cor. sec. 15-17-30. R.U. mch.
Paul Sargent No. 1 State, NE sec. 16-17-31. T.D. 3,749 ft.; P.B. 3,745 ft.; tstg.
R. A. Shugart No. 1 Coulthard, C NW SW sec. 35-18-31. T.D. 4,003 ft.; U.R. swabs; est. 75 B.O.P.D.
Texas Co. No. 1 Welch, sec. 30-20-31. Drlg. 2,310 ft.
W. K. Royalty No. 2 State, C NW NE sec. 16-17-31. R.U. mch.
W. O. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. T.D. 3,138 ft.; S.D.O.
Western Drlg. Co. No. 1-A Western, SE SW NW sec. 23-17-29. Loc.
Nell Wills et al No. 1-A State, C S½ SW SE sec. 17-20-30. Drlg. 1,093 ft.
Martin Yates, Jr., No. 1 Conlon, SW NW NW sec. 7-24-27. T.D. 1,465 ft.; S.D. for repairs.

Chaves County

English & Hamon No. 11 Billingslea, SE sec. 9-15-29. T.D. 3,680 ft.; P.B. 3,456 ft.; fsg.
E. J. Fisher No. 1 Etz Permit, NE sec. 23-7s-26. T.D. 1,220 ft.; S.D.O.
Grastorf & Caudill No. 1 Smith, C NE NE sec. 1-4s-29. Wildcat; R.U. and S.D.
J. & L. Drlg. Co. No. 2 Hurd, SW sec. 11-11-26. Drlg. 40 ft.

Curry County

Bond & Harrison No. 1 Hart ranch, C NW SE sec. 13-2n-31. T.D. 3,258 ft.; S.D.O.

De Baca County

Land Owners Oil Co. No. 1 McAdoo, SW cor. sec. 16-1s-7e. O.W. prep. to deepen from 5,850 ft.
James D. Ward No. 1 Summers, NW NE SW sec. 17-4n-20. T.D. 260 ft.; S.D.
N. F. Woods No. 1 Jones, C NE SW sec. 17-4n-20. T.D. 25 ft.; S.D.

Dona Ana County

Jules C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

McKinley County

S. Dysart No. 1 Govt., NE sec. 14-14-10w. T.D. 1,390 ft.; fsg.

Otero County

George Mulvey No. 1 State, SW cor. sec. 11-25-8. T.D. 263 ft.; S.D.
Fred Turner, Jr., No. 1 Ella Everett, C SE SE sec. 34-22-13. Drlg. 1,550 ft.
Fred Turner, Jr., No. 1 H. V. Everett, C SE SE sec. 28-22-13. Spd. and S.D.

Roosevelt County

C. S. Peterson and Conquistadores Oil Co. No. 1 Good, NW SE SE sec. 28-5s-30. T.D. 455 ft.; S.D.O.

NORTHWEST NEW MEXICO

Steps have been taken which may lead to the exploration of several structures for deep production in the Navajo Indian Reservation in northwestern New Mexico. Several companies suggested recently to the department of the interior, and the department, in turn, suggested to the Navajo Indian Council, that if the council put up at auction certain structures on the reservation, most of which already have been tested to the Dakotas, that the companies will consider the immediate testing of one or more of the structures for Pennsylvanian production provided the terms under which the land is auctioned do not seem to be prohibitive. It is considered unlikely that anything can be concluded in time for commencement of any wells this summer. The companies mentioned in connection with the suggestion are Continental Oil Co., California Co. and Stanolind Oil & Gas Co.

The Stanolind company operates the Hogback field, which was discovered in 1922 by the old Midwest Refining Co., and which has around 260 acres proven in the Dakotas at 700 and 800 feet. The oil has an average gravity of 63 degrees A.P.I. scale. It produced 1,690,000 bbls. up to the end of 1936. No deep test has been drilled. The Continental is in charge of operations at the Rattlesnake structure, where the discovery well was completed about 1924. The Dakota is reached at around 800 feet and oil has tested as high as 76 degrees A.P.I., but quickly weathers to 60. Two Pennsylvanian tests have been drilled. The last of these, completed in 1932 at 7,370 feet, was estimated at 600 bbls. daily. Producers & Refiners Corp. drilled Table Mesa to 3,000 feet, finding water in all sands. The Continental then acquired it, regeologized the structure, and brought in the discovery well at around 1,400 feet, in the Dakota. No deep test has been drilled. The Tocito dome was drilled by the Gypsy Oil Co. to 3,022 feet and by the Continental to 1,430 feet and both found water in all sands. Beautiful Mountain was drilled in 1925. The Dakota at 275 feet had water. Deepest test was 1,727 feet. Several other structures in the area have never been tested to the Pennsylvanian.

San Juan County

C. E. Brawley No. 1 Godrun, C SE SW section 34-30n-11w, Aztec-Bloomfield district, was abandoned in shale at 1,400 feet.

Continental Oil Co. No. 70 Rattlesnake, NE NE SW sec. 2-29n-19w. Drlg. 160 ft.

Socorro County

Central New Mex. Oil Co. No. 1 Belen Land Grant, SE NW sec. 16-3n-1e. Drlg. 2,300 ft.

COLORADO

Archuleta County

The Cortez Oil Co. No. 1-A Crowley, NW SE NE section 2-32n-2e, Price district, reached contract depth at 2,000 feet and is shut down for orders. It was dry in the Dakota.

Boulder County

J. B. Furstenberg No. 1 Foote, NE NW SE sec. 20-1n-70w. Drlg. 4,230 ft.

Cheyenne County

The Gulf Oil Corp. No. 1 Union Pacific-Larsen, in the Mount Pearl district in eastern Colorado, was unable to make a drill stem test at 4,813 feet, total depth, on account of inability to set the tester. The hole began caving and it was decided to run the 9⅝-inch and set it top of the show at 4,808 feet. Reaming is in progress at below 3,200 feet. In the meantime hole is being circulated with 11-pound mud under 4,200-pound pressure. The horizon has been identified as the Shawnee, which lies above the Kansas City lime and the Upper and Lower Cherokee.

The test is being closely watched by scouts from the Mid-Continent as well as the Rocky Mountain area and there is considerable leasing far out from the well. The Gulf has a solid block around the well comprising more than 26,000 acres. Several majors have acreage just outside the block.

Gulf Oil Corp. No. 1 Union Pacific-Larsen, C SE NW sec. 13-13s-49w. T.D. 4,813 ft.; rmg. to set 9⅝-in. at 4,808 ft.

Grand County

Interstate O. & R. Co. No. 1 Hinman, NE SE NW sec. 11-2n-81w. S.D. 3,620 ft. for fuel and repairs.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75w. Drlg. 5,715 ft.

Prowers County

Extensions of leases on the Cottonwood block in Townships 21s and 22s, Ranges 44w and 45w, in northern Prowers County, running to the Continental Oil Co., were placed on record at Lamar the past week. It was officially stated that a test will start on the block before May 1 unless unforeseen contingencies arise. Location has not yet been released. This is one of the few blocks in eastern Colorado which has definite indications of surface structure. Detailed seismic surveys as well as surface geology have been made by the Continental and others and the Indian Territory company core-drilled the area. The Continental has around 18,000 acres, and the Texas, Magnolia, Gulf and Indian Territory companies hold some acreage. The block is about 10 miles to the north of the Trojan well which had good shows in the Lansing-Kansas City and Cherokee horizons.

Rio Blanco County

Texas Co. and California Co. No. 1 Unit, SW SE NW sec. 35-3n-94w. T.D. 6,918 ft.; cmtd. 7-in. at 6,817 ft.; prep. to test Morrison through perf. pipe.

Routt County

Mid-Colorado Petroleum Co. No. 1 Omholt, NE NE SE section 29-4n-87w, a wildcat on Fish Creek, which has been drilling intermittently for several years, was due to reach the objective Sundance a week ago, but the roads are covered with 8 feet of snow and no word has come out from the well. Last reported depth was 3,120 feet. It was then looking for a seat to set the 8¼-inch before drilling into the Sundance. It was reported in the top of the Morrison at around 2,900 feet. It had a show of oil in the Lakota, water in the Dakota, and around 1,000,000 feet of gas in the Frontier.

WYOMING

Albany County

Wyco Oil Co., Inc., No. 3 Chappel, NE NE NW sec. 33-21n-76w. T.D. 2,546 ft.; fsg. D.P.
G. R. McConnell No. 1 Govt., CWL SW SE sec. 6-15n-75w. T.D. 1,065 ft.; P.B. to Muddy at 890-920 ft.; rng. csg. to 880 ft.

Big Horn County

Peay Oil Co. No. 1 Denio, Tract 43-C, section 15-55n-97w, Byron field, which has been endeavoring to complete at around 4,000 feet for some time, is reported pumping 15 bbls. per day. Last reported depth was 3,998 feet, where it was trying to get a formation shutoff.

Joan Oil Co. No. 1 Howell, NE NW NE sec. 32-55n-97w. T.D. 2,320 ft.; C.D.; ran 10-in. and changing from steam to gas for fuel.

Carbon County

Italo Pet. Co. No. 1 Tunney-Bragg, NE SE NW sec. 11-26n-81w. Drlg. 1,205 ft.
Sinclair-Wyoming Oil Co. No. 12-B Wertz, SE NW NW sec. 7-26n-89w. Drlg. 4,135 ft.
Ohio Oil Co.-California Co. No. 4-A Kyle, 661 ft. from N line and 648 ft. from E line, sec. 26-21n-79w. Drlg. 5,430 ft.; top Wall Creek 4,130 ft.
Ohio Oil Co.-California Co. No. 6 Union Pacific-Johnson, C SW SE sec. 23-21n-79w. Drlg. 5,164 ft.; top Muddy 4,975 ft.
Ohio Oil Co. No. 14 H. & C., SE NW SW sec. 35-20n-78w. T.D. 274 ft.; cmtg. form. to restore cir.

Converse County

New Era Fuel Corp. No. 1 Layne, SE NW NE sec. 27-32n-69w. Drlg. 700 ft.
New Era Fuel Corp. No. 1 Gaspar, NW NW SW sec. 25-32n-69w. Drlg. 785 ft.
D. O. Gray No. 1 Wm. Lane, SW SE SE sec. 22-32n-69w. S.D. 525 ft.
Ainsworth Oil Co. No. 1 Marberger, NE SE NE sec. 34-32n-69w. Drlg. 760 ft.
Wyshawn Oil Co. No. 1 Lindley, NW SE sec. 34-32n-69w. Drlg. 210 ft. (formerly Hall-Thornton).
Osage Trust Co. No. 1 Miller-Govt., SE NW NW sec. 29-32n-69w. T.D. 751 ft.; U.R. 6⅝-in. to bttm.
Hall-Thornton et al No. 1 Roth, SE NW SE sec. 13-32n-69w. T.D. 500 ft.; cmtd. 8¼-in. at 493 ft.
Chadron-Osage Oil Co. No. 1 O'Meara, NE SE sec. 28-32n-69w. Set 8¼-in. at 250 ft.; drlg. ahead.

Fremont County

Sinclair-Wyoming Oil Co. No. 2-B Muskrat, NW NW NE sec. 4-33n-92w. Cg. 4,074 ft.; S.G. at 4,056 ft.
Stanolind O. & G. Co. No. 1 Govt., C SE SE sec. 3-33n-96w. T.D. 7,500 ft.; cmtd. 9⅝-in. at 7,450 ft.; W. O.C.
Consolidated Oil Properties No. 3 Ewart, C SW SE sec. 16-1n-14w. T.D. 700 ft.; prep. to acid.

Natrona County

General Pet. Corp. No. 1 Govt., C NW SE sec. 21-35n-77w. Drlg. 6,225 ft.
Stanolind O. & G. Co. No. 8 T.P.-Wyo.-Asso.-35, C NW NW sec. 35-40n-79w. T.D. 3,997 ft.; tstg.

Niobrara County

Continental Oil Co. No. 3-A Diehlman, SE SE SW sec. 5-35n-65w. Drlg. sh. 1,450 ft.; 13⅜-in. at 377 ft.
Argo Oil Co. No. 6 Ford, NW SW NW sec. 33-36n-65w. Drlg. 3,438 ft.
C. L. Price No. 1 Lamb, NE NW NW sec. 7-35n-65w. Drlg. below 4,017 ft.
Ohio Oil Co. No. 8 Converse Sheep, NE SE SW sec. 32-36n-65w. Drlg. 4,843 ft. in Converse; to test Leo sd. on top str.
Continental Oil Co. No. 3 Apex-1, SE SE NE sec. 34-36n-65w. T.D. 5,480 ft.; cmtd. back to 3,217 ft.; drlg. sd. and sh. at 4,067 ft.

Park County

Ohio Oil Co. No. 4 Mack-O.P.C.-4, SE SW SE sec. 30-58n-99w. Cg. 3,034 ft.

Sweetwater County

Two wells were completed in the Middle Baxter Basin area. The Rocky Mountain Drilling Co. No. 1 Osborne, SE SE SE sec. 12-18n-104w, made 3,000,000 feet of gas initially from the Dakota at 2,790 feet, total depth. The 8⅝-inch was cemented at 2,480 feet.

The Mountain Fuel Supply Co. No. 1 Betty Hoyt,

SW cor. section 32-19n-103w, was dry in the Dakota and was abandoned at 3,020 feet.

Rocky Mountain Drlg. Co. No. 1 Lee, NE NW SE sec. 10-19n-104w. Drlg. below 2,831 ft.
Mountain Fuel Supply Co. No. 1 Agnes Fay, 330 ft. from E line and 1,980 ft. from S line, sec. 18-18-103w. T.D. 2,506 ft.; recmtd. at 1,840-1,910 ft. with 50 additional sacks.
Mountain Fuel Supply Co. No. 1 Clark, NW SE SW sec. 12-19n-104w. S.D. 300 ft.
Sinclair-Wyoming Oil Co. No. 77, SE NE NE sec. 10-26n-90w. T.D. 4,049 ft.; shot 100 qts.; 7-in. collapsed at 2,720 ft.; W.O. Baash-Ross expander.

Weston County

Production in the Osage field in January amounted to 21,810 bbls., and refiners took 17,000 bbls. from the field.

Wyoming O. & G. Co. No. 8, SW SW NW sec. 24-46n-64w. R.U.
H. D. Wiltse No. 14, NW NW NE sec. 17-46n-65w. R.U.
Patterson Oil Co. No. 19, CSL SE SE sec. 17-46n-63w. R. U.
John Brorphy No. 1 George, SW SE NW sec. 26-48n-64w. T.D. 1,964 ft.; W.O. csg.

MONTANA

Big Horn County

P. O. Oil & Gas Co. No. 1, NW NE NE sec. 25-9s-35e. Drlg. 340 ft.
E. L. Dana No. 1 Hardy, SW NW sec. 22-9s-35e. S.D. 700 ft.

Carbon County

R. C. Tarrant No. 2 Heare, NW SE NW sec. 14-6s-10e. Drlg. 1,640 ft.
Sha-Wa Pet. Co. No. 1 Govt., SW SW NE sec. 35-9s-23e. T.D. 3,030 ft.; U.R. 8⅝-in. at 3,020 ft.

Glacier County

W. H. Ferguson, vice president of the Continental Oil Co., said upon his return to Denver headquarters from a business trip to Montana that his company has no immediate plans for constructing a refinery in the northern Montana district. The company operates a refinery at Lewistown which runs on Cat Creek crude.

The Glacier Production Co., which has 2,000 bbls. per day production in the Cut Bank field, but whose wells have been shut in for some time, has begun the construction of two 80,000-bbl. tanks in the field for the storage of crude.

Cut Bank has only one drilling well, but location was released this week for another which will be of more than ordinary interest. This is the Santa Rita Oil & Gas Co. No. 8 Tribal, C NE SW sec. 16-35n-6w. Location is 1,980 feet west of its No. 1 Lander, which was completed two years ago last month as the biggest well in the field and one of the largest in Montana. With that record it also established another for being the first good producer in the Sunburst formation in Cut Bank. No. 1 Lander is now flowing 725 bbls. per day through tubing and up to January 1, 1938, had produced 628,000 bbls. Location is on the west side of the field. For a time it was believed to be a freak as offsets on the north, east and southeast had no Sunburst production. It began to look like the opening of a new pool, however, when last August the Texas Co. completed its No. 2 Tweedy, half a mile to the southwest, for 500 bbls. per day from the Sunburst. It is still making 250 bbls. per day through the tubing. Then in the following month Santa Rita No. 2 Lander, in between the two wells, flowed 519 bbls. initially and is at present pumping 325 bbls. per day. The new Santa Rita location will test the area to the west of the big well.

Santa Rita O. & G. Co. No. 8 Tribal, C NE SW sec. 16-35n-6w. M.I.M.
A. B. Cobb No. 1 State, C NE NE sec. 30-37n-4w. T.D. 2,592 ft.; S.D. until spring.
Jack Marshall No. 2 All.-119, SE SE NW sec. 1-32n-6w. T.D. 3,045 ft.; rng. 7-in.

Lewis and Clark County

Lewis & Clark Oil Synd. No. 1 Heilman, NW NW SW sec. 11-18n-5w. T.D. 1,190 ft.; C.D.; rng. csg.

Toole County

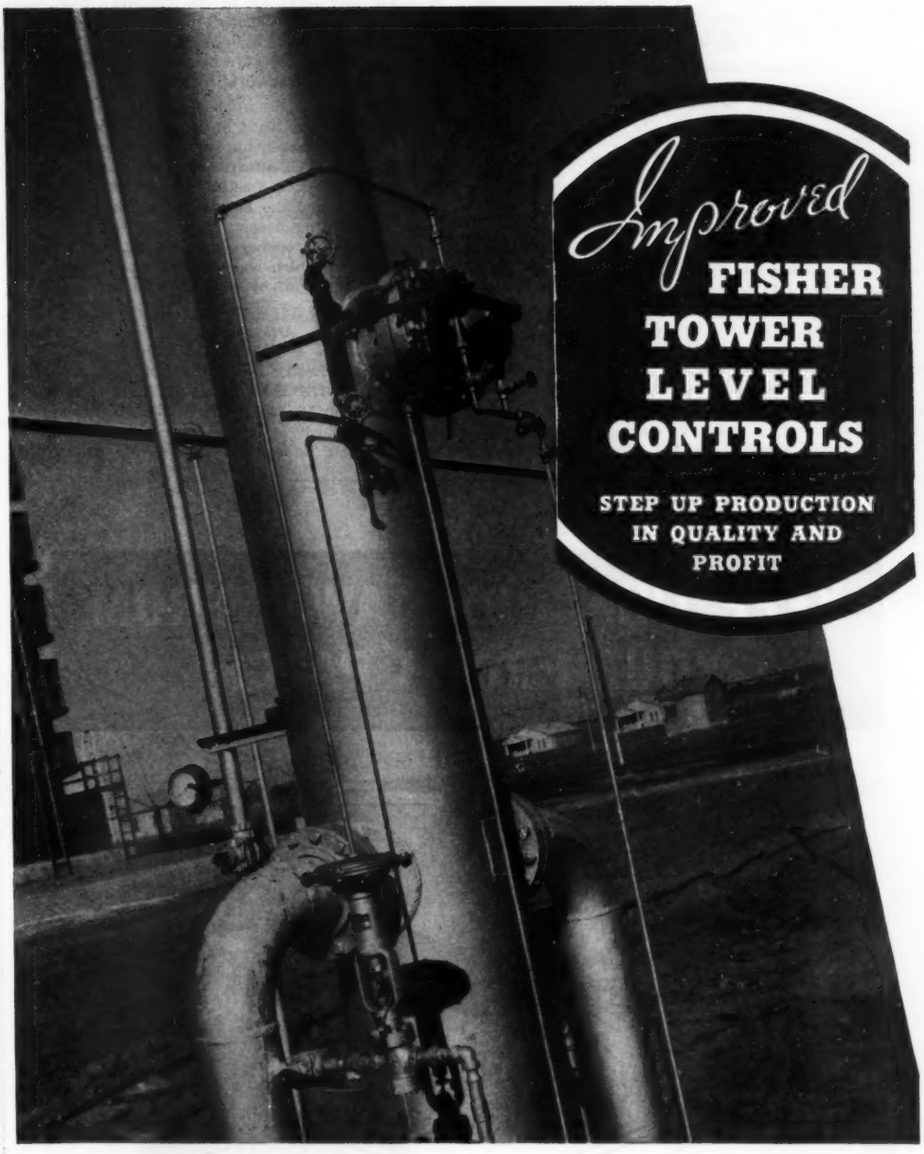
Every drilling well in the Kevin-Sunburst field was idle this week on account of weather conditions. One well reached its objective before shutting down. This was Platke & Rader No. 1 Ward, NW SE SE section 29-35n-3w, which had the contact at 1,698-1,720 feet.

Big West Oil Co. No. 6 Gunderson, NE NW NW sec. 19-35n-2w. S.D. 850 ft.
B. A. S. Aronow No. 1 Govt., SE SE SW sec. 18-35n-2w. S.D. 850 ft.
West Kevin Community Lease, Inc., No. 1 McClary, SW NE NW sec. 3-34n-4w. S.D. 1,200 ft.

UTAH

Grand County

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. T.D. 6,715 ft.



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BRINE TOWER CONTROL

The FISHER Type 234-C Internal Float Pilot Operated Level Control shown on the installation above, is operating on a small diameter brine tower controlling the level by operation of the diaphragm motor control valve shown in the lower foreground. This installation is made at one of the new and modern gasoline plants recently built in the Mid-Continent Field.

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Protect your plant against such hazards with new, improved FISHER Pilot Operated Level Controllers. These Controllers give you guaranteed full throttling control because they are correctly engineered and accurately sized. Each Controller is individually built and tested to meet your exact operating conditions.

These controllers are available for all pressures and temperatures in either the internal float type, as illustrated above, or the external float cage type. FISHER also makes a complete line of non-pilot, direct operating FISHER Level Regulators. Ask FISHER engineers to analyze your problems and recommend the correct size and type of control equipment. Or, for further details write for Bulletin 36-B.

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REPRESENTATIVES IN ALL PRINCIPAL CITIES

Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. Drlg. 2,930 ft.
Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. T.D. 857 ft.; U.R. to lower 12½-in. to 265 ft.

Gulf Coast Fields

(Continued from Page 85)

Ed Tate, both being offsets to the discovery well in section 44-3s-2e.

Shallow Sand Discovery

A new shallow sand discovery for the west side of the Charenton field, St. Mary Parish, was made by the Pan American Production Co. with the completion of No. 1-A Ecuer which made an initial production of 380 bbls. of oil per day through a quarter-inch choke. The hole was drilled to 10,317 feet, but was plugged back and completed in sand at 2,618-40 feet, the total depth.

Additional development was started in the newly opened Woodlawn field, Jefferson Davis Parish, by Union Sulphur Co., which is rigging up No 2 Calcasieu National Bank, C NE NE NE section 12-9s-6w. It is 940 feet northeast of the discovery well which was officially completed the past week for an initial production of 50 bbls. of distillate per day through a 33/64-inch choke and a 12/64-inch bottom-hole choke. Production was obtained by perforating the casing at 8,286-88 feet.

Superior Oil Co. No. 1 State, about a mile offshore from Cameron Parish, apparently uncovered another sand when the well attempted to blow out at a total depth of 9,394 feet. It was brought under control with 14-pound mud and the hole is being conditioned preparatory to coring deeper. This well is looked upon as a possible pool opener, as 70 feet of sand showing oil was logged which was topped at 5,100 feet. This section was cased off by cementing 7⅝-inch casing at 7,166 feet.

In the Bayou Des Allemands field, St. Charles Parish, Amerada Petroleum Corp. made location for No. 1 Gheens Realty Co., 2,834 feet west and 5,335 feet south of NE cor. section 12-15s-20e, being located in section 56, Lafourche Parish. The company's second test which is located across the line in St. Charles Parish is waiting for cement to set after squeezing off perforations at 6,810-15 feet. A previous test below these perforations resulted in the well testing salt water.

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COMPLETIONS ON TEXAS COAST

Completions of the week with pay-sand record or total depth, and initial 24-hour production, follows:

Colorado County

Garwood field: Texas Crusader Oil Co. (Coyle & Concord) No. 1 Hancock-Broussard, 6,216 feet, abandoned.

Brazoria County

Hastings field: Humble Oil & Refining Co. No. 1 Lerew, oil sand 6,020-80 feet, 535 bbls., quarter-inch choke. Stanolind Oil & Gas Co. No. 1 George Liverman, 6,080 feet, perforated casing 6,034-77 feet, 577 bbls., quarter-inch choke.

West Columbia field: Texas Co. No. 3 T. L. Smith, oil sand 5,537-76 feet, 337 bbls., quarter-inch choke.

Fort Bend County

Thompson field: Naylor-DeCosta No. 3 S. B. Gehr, 5,399 feet, 141 bbls., flowing by heads.

Harris County

Friendswood field: Humble Oil & Refining Co. No. 1 Etta Gibson, oil sand 5,760-6,042 feet, 580 bbls., quarter-inch choke.

Tomball field: Humble Oil & Refining Co. No. 1 Diedion, 5,588 feet, abandoned. Humble Oil & Refining Co. No. 1 Carroll, 5,577 feet, 524 bbls., quarter-inch choke. Humble Oil & Refining Co. No. 1 Voight, 5,593 feet, perforated casing 5,568-73 feet, 462 bbls., quarter-inch choke.

Jefferson County

Amelia field: Humble Oil & Refining Co. No. 11 S. L. Guinn, 6,779 feet, 552 bbls., quarter-inch choke.

Liberty County

Hardin field: Atlantic Refining Co. No. 1 Jett Murphy, 7,610 feet, perforated casing 7,595-99 feet, 241 bbls., quarter-inch choke. Atlantic Refining Co. No. 1 W. McMurtry 7,656 feet, perforated casing 7,563-66½ feet, 566 bbls., quarter-inch choke. Sun Oil Co. No. 1 Cessna, 7,544 feet, 95 bbls., quarter-inch choke. L. W. Wickes No. 1 M. F. Tullos, 7,634 feet, 601 bbls., quarter-inch choke.

Matagorda County

Van Vleck field: Skelly Oil Co. No. 14-B Cobb, 11,645 feet, plugged back 9,331 feet, perforated 7,491-96 feet, 709 bbls., quarter-inch choke.

Orange County

Orange field: Gulf Oil Corp. No. 1 Orange National Bank, 5,924 feet, 690 bbls., quarter-inch choke.

Polk County

Segno field: Gulf Oil Corp. No. 9 Sarah Wing, 5,190 feet, 315 bbls., quarter-inch choke.

Wharton County

Withers field: Texas Co. No. 43-C Pierce estate, top oil sand 5,537-47 feet, 295 bbls., quarter-inch choke.

Pickett Ridge field: Great Plains Oil Co. No. 2 Bishkin and Meyers, 4,599 feet, perforated casing 4,581-91 feet, 120 bbls., one-eighth inch choke.

Kansas Fields

(Continued from Page 84)

NE NE SW section 1-23-4w, an old Reno County well in the Burrton area, was deepened from 3,363 feet to 3,368 feet, recompleted. After acidizing, it pumped 65 bbls. of oil and 130 bbls. of water daily.

Shell Petroleum Corp. No. 5 Welch A, NW SW SW section 9-24-4w, was rigging up rotary. Transwestern Oil Co. No. 4 Teter, SW NW SE section 12-23-4w, was a rig.

Rooks County

Leavell Coal Co. No. 2 Baxa, C W half W half NW section 12-9s-17w, an old Rooks County well, was deepened from 3,355 feet to 3,466 feet. After plugging back to 3,350 feet, it was completed for old potential of 794 bbls. of oil.

Butler County

Wixson and others No. 1 Long, SE cor. section 2-25-3e, was bottomed at 3,732 feet, plugged back to 2,718 feet and was dry and abandoned.

National Refining Co. No. 1 Prey, SW NW SW section 31-27-3e, Butler County, found sand at 3,099 feet, pay 3,104 feet, total depth 3,107 feet, and pumped 204 bbls. of 29-gravity oil daily.

Saco Oil Co. and others No. 1 Pettitt, SW NW NW section 21-28-6, was moving in material. Vickers Petroleum Co. No. 3 McCraner C, C S half N half NW NW section 1-25-3e, was a machine.

Woodson County

Chris L. Sheedy and others No. 7 Lee, C S half SW NE section 28-25-14, had sand at 1,408-74 feet, total depth, and pumped 20 bbls. of oil daily.

Mossman & Ashlock No. 1 Dreyer, SE SW SE section 25-23-13, topped Mississippi lime at 1,668 feet and was dry and abandoned at 1,735 feet.

Stevens County

Panhandle Eastern Pipe Line Co. No. 1 Cavner, C SW section 33-31-38w, Hugoton area, Stevens County, was bottomed at 2,800 feet, was acidized and produced 9,000,000 feet of gas.

Kuhn Brothers No. 1 Burrows, C NW section 22-34-38w, was a location.

Finney County

Atlantic Refining Co. No. 1 Nunn, SE SE NE section 27-21-34w, wildcat in Finney County, was a rig.

Cowley County

Smith and associates No. 1 Whitson, SE SW NW section 9-33-6e, Cowley County, was a location.

Estimated Daily Production

Estimated daily production of Kansas for the week ending February 12, and for the week preceding, was as follows:

	Barrels	
	Feb. 12	Feb. 5
Oxford City	2,300	1,400
Burrton	11,275	12,225
Ritz-Canton	6,600	5,200
Graber	2,250	2,800
Hollow-Nikkel	3,500	2,450
Lerado	1,375	1,675
Voshell	3,000	2,250
Wellington	2,500	2,150
Ellsworth County:		
Lorraine	2,300	2,450
Other pools	1,305	720
Rice-Barton counties:		
Bloomer	2,625	4,000
Chase	5,725	6,650
Geneseo	2,300	1,975
Raymond	1,575	950
Silica	15,425	13,600
Silica—South	2,650	2,750
Keesling	750	1,100
Wherry	4,625	1,450
Miscellaneous Rice	3,925	8,550
Miscellaneous Barton	4,940	5,030
Russell County:		
Fairport	1,995	1,880
Gorham	1,630	1,860
Russell	1,470	2,150
Sullivan	6,875	7,570
North Trapp	9,170	10,520
Miscellaneous Russell	7,665	8,585
Sedgwick County:		
Valley Center	1,070	1,110
Miscellaneous	2,950	2,810
Ellis County:		
Bemis	5,675	6,725
Miscellaneous	3,120	2,700
Kingman County	635	630
Stafford County	3,135	3,490
Greenwood County	9,750	9,875
Butler County	16,000	16,000
Other fields	27,215	24,670
Total Kansas	179,300	179,950

West Texas Fields

(Continued from Page 95)

PANHANDLE COMPLETIONS

(24-hour gauges)

Carson County

Pansota Oil Co. No. 2 Block, 3,047-97 feet, 615 bbls.

Gray County

Cady-Connor & Crenshaw No. 2 Holmes, 3,108-3,208 feet, 411 bbls. Cities Service No. 4 Meers C, 3,230-52 feet, 358 bbls. J. D. Nye and others No. 6 Saunders, 2,900-60 feet, 851 bbls. Gulf Oil Corp. No. 11 Faulkner A, 2,864-2,965 feet, 102 bbls. King Oil Co. No. 3 Baer C, 3,269-81 feet, 320 bbls. Saulsbury Oil Co. No. 1 Yoder, dry and abandoned at 3,355 feet.

Hutchinson County

J. E. Crosbie, Inc., No. 25 Pitts, 2,882-2,960 feet, 468 bbls. Phillips Petroleum Co. No. 4 Juanita Johnson, 3,069-80 feet, 662 bbls. Sinclair Prairie No. 5 Merchant-Vacuum, 2,368-2,605 feet, 30,669,000 feet. Stayton Oil Co. No. 6 Moore C, 3,148-88 feet, 412 bbls. Texas Co. No. 7 Moore, 3,020-88 feet, 25 bbls. Texas Co. No. 11 Pond, 3,030-77 feet, 608 bbls. Tide Water Associated Oil Co. No. 1 Thompson-Umphreys, 3,179-3,205 feet, 304 bbls. Pannowa Oil Co. (L. L. Wiles) No. 1 Perkins, 3,030-83 feet, 676 bbls.

Moore County

Sinclair Prairie No. 1 C. R. Jones, 2,844-3,250 feet, 45,257,000 feet gas.

Wheeler County

Lela Oil & Gas Co. No. 11 Laycock, 1,925-2,105 feet, 5,100,000 feet gas. Magnolia Petroleum Co. No. 3 Worley, 2,369-80 feet, 188 bbls. Dumar Oil & Gas Co. No. 2 George, 1,810-22 feet, 24,750,000 feet gas.

Treatment of Emulsions

(Continued from Page 66)

2½-inch or 3-inch staves are performing better than the early wood tanks which were built with staves only 2 inches thick. Water must be kept on the deck of such wood tanks in order to prevent them from leaking; also wood treating tanks should never be heated above 140° F.

A bolted steel tank may be more desirable as it is easier to keep clean, but it does not hold heat near as well as the wood tank. In some instances it has been necessary to replace or repair the bottoms of the regular steel tanks within a period of two years, the reason for this being, that in some localities in the East Texas field, the Woodbine water, when heat is applied, becomes more corrosive and destructive to regular tank steel.

There is now being tested in the field a treating tank with the bottom and first ring of staves, which are 8 feet high, made of galvanized wrought iron. Inspection of one or two of this type tank has shown no corrosive effects from the hot salt water handled through them. Tanks inspected had been

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Circulating Pump

For a treating system circulating pump, most any type pump may be used that is available, providing it has sufficient capacity and will maintain a sufficient head.

For operating a hot water wash tank, 750 bbls. in size, the circulating pump should have a capacity of 80 bbls. per hour at a head of 40 feet; this to meet all requirements that may be added to its duties. That capacity will move a bad tank of oil and retreat it within a working day and will allow the pumper on a lease with 10 wells time to perform his other duties.

Centrifugal pumps of 1½-inch size, either electric or gas engine driven, have been used quite satisfactory to handle hot salt water. The shaft and impeller of these pumps should be of bronze or some rustless steel. In such a type pump handling hot salt water it is necessary to use a soft lubricated centrifugal pump packing and to keep it lubricated with some packing gland grease, otherwise, salt will accumulate in the gland and packing and tend to freeze the shaft.

Thermostat

A thermostat with a narrow range of temperature will maintain a much closer regulation of the temperature in the treating system. They may be selected, and set, so as to operate within rather narrow limits.

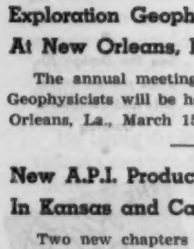
Conclusions

In conclusion, the treating of emulsion has a very important place in production and marketing of crude oil, and a very expensive one. This expense must be considered a total loss and should be kept in mind when laying out a treating plant.

The writer does not offer a set or fast rule for laying out a treating system, but has given his views from personal contact and observation while operating in the East Texas field.

District Manager for Murcell

George E. (Red) Tyson, well known in the petroleum industry, has been appointed Mid-Continent and Gulf Coast manager for U. C. Murcell, Inc., with offices at 612 Louisiana, Houston, Tex. Mr. Tyson will handle the servicing of the specially constructed trucks designed to weld casing in the field and will have charge of operations in the Mid-Continent and Gulf Coast areas.



Exploration Geophysicists to Meet At New Orleans, La., in March

The annual meeting of the Society of Exploration Geophysicists will be held at the Roosevelt Hotel, New Orleans, La., March 15, 16 and 17.

New A.P.I. Production Chapters In Kansas and California

Two new chapters of the American Petroleum Institute Division of Production have been organized; one at Great Bend, Kans., known as the Western Kansas Chapter, the other at Coalinga, Calif., named the Coalinga-Kettleman Chapter.

Fifty-seven representatives of the petroleum and allied industries attended the Great Bend meeting and elected the following officers:

Chairman, Dewey Jordan, Atlantic Refining Co.; first vice chairman, Henry Nething, Stanolind Oil & Gas Co.; second vice chairman, George Neylon, Conway-Owens-Neylon Lumber Co.; and secretary-treasurer, H. A. Glover, American Manufacturing Co. of Texas.

A committee to formulate suggestions and make arrangements for setting up local vocational classes was appointed, with Fred Shelton, of Phillips Petroleum Co., as chairman.

Seventy-five representatives of the petroleum and allied industries were in attendance at the initial meeting in Coalinga, and 49 joined the organization. After adopting a constitution and by-laws, the following officers were elected:

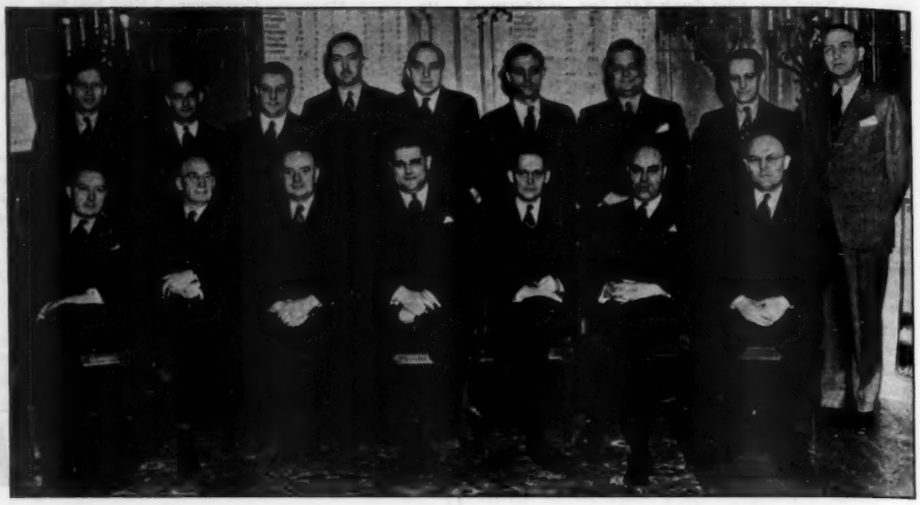
Chairman, E. P. Campbell, Standard Oil Co. of California; first vice chairman, T. R. Tinker, Union Oil Co.; second vice chairman, W. S. Fisher, Confidence Oil Co.; and secretary-treasurer, Harold J. Goldbaum.

An advisory committee was appointed with the following members:

To serve for two years: W. R. Harshbarger, Texas Co.; A. S. Jones, Tide Water Associated Oil Co.; J. R. Harmon, Shell Oil Co.; C. B. Kimberlin, Kettleman North Dome Association; C. Bevan, Standard Oil Co. of California; and J. Farner, Southern California Gas Co.

To serve for one year: D. Stewart, Shell Oil Co.; F. Falenzer, Universal Consolidated Oil Co.; D. Hoenshell, Kettleman North Dome Association; M. Putnam, Standard Oil Co. of California; K. Mehrens, Superior Oil Co.; and H. Cassidy, Salvia Oil Co.

GOODYEAR MEN DISCUSS PLANS FOR COMING YEAR



Sales plans for the coming year and a discussion of several new and improved products to be introduced by the mechanical rubber-goods division of the Goodyear Tire & Rubber Co. were subjects of a three-day meeting held in the Park Central Hotel, New York. Among the Akron, Ohio, representatives were: Front row—W. H. Summers, G. L. McCrea, W. C. Winings, C. P. Joslyn, H. E. Morse, J. E. Stafford, W. T. Bell. Back—N. E. Kimball, R. W. Sanborn, H. J. Mackin, G. G. Cartwright, E. W. Stephens, E. W. Sanders, A. D. Foster, S. B. Ellis, and L. J. Amsdell.

Socony-Vacuum Orders Tankers From Bethlehem Shipbuilding Corp.

Socony-Vacuum Oil Co. has awarded a contract to Bethlehem Shipbuilding Corp., Ltd., for construction of two tankers, at Sparrows Point, Md. The contract involves close to $4,500,000.

The new vessels will be of Socony-Vacuum design, twin bulkhead type, constructed on the Bethlehem-Frear system. The interior will be electric-welded.

The specifications call for highest classifications and include all the improvements and special requirements of the new governmental regulations. The vessels will have an overall length of 501 feet 7½ inches, and will carry 16,250 tons deadweight, with a cargo capacity of 5,600,000 gallons.

Power is furnished by high-pressure geared turbines developing 4,000 s.h.p. at 75 revolutions per minute, which will give a service speed of 13 knots. Steam will be supplied by watertube boilers at 400 pounds working pressure and superheated to a total temperature of 725° F.

It is expected the vessels will be commissioned in 14 and 16 months.

California Fields

(Continued from Page 100)

Co. completed No. 2 Dal Parto, flowing 870 bbls. of clean 16.7-gravity oil daily from 4,198 feet. Union Oil Co. completed No. 2 Bettiga, pumping 144 bbls. of 16.8-gravity oil per day from 2,615 feet. E. H. Moore, Inc., developing the Union Sugar property in the west end of the field, has completed No. 1-G pumping 609 bbls. of 16.1-gravity oil cutting 3 per cent daily from 5,007 feet. This well was finished with 289 feet of 6⅝-inch liner including 241 feet of perforated landed at 5,000 feet.

Eastern Kentucky Fields

(Continued from Page 102)

In Lee County, Thomas Witmer No. 8 C. J. Tipton, on Billie's Fork, total depth 538 feet, was good for 5 bbls. per day initially.

In Lawrence County, Rockcastle Gas Co. No. 1 J. W. Ball, on Mill Branch, total depth 2,489 feet, in shale, gauged 589,000 feet of gas the first 24 hours.

In Johnson County, Francis & Webb No. 3 Wells, on Daniels Creek, started at 143,000 feet of gas, no total depth given.

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We invite oil companies, drilling contractors and producers of calcium carbonate to protect themselves under this patent.

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Patent Owners
555 South Flower Street
LOS ANGELES CALIFORNIA

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Feb. 14.—On the west flank of South Turner Valley, recent acidizing operations have considerably increased the potential of the field. Brown Oil Corp. No. 1, LSD 14, section 16-18-2w5, was given a second treatment, stepping up the official potential from 1,597 to 1,849 bbls. a day. Brown No. 2, LSD 8, section 20-18-2w5, with a potential of 628 bbls., went up to 1,006 bbls. after a second treatment. Sunset Oils No. 1, LSD 10, same section, recorded 1,721 bbls. potential after first acid treatment. Royal Canadian Oils No. 1, LSD 15, same section, with 920 bbls. potential, is testing after acid treatment. West Flank Oil Co. No. 2, N half LSD 1, section 32-18-2w5, showed a potential of 666 bbls. a day. The aggregate potential production of the field is now 29,917 bbls. of crude per day, and about 1,800 bbls. a day of naphtha.

Prairie Royalties No. 1, LSD 16, section 17-18-2w5, with a potential of 1,275 bbls. a day, is testing for potential after acidizing.

West Central Duster

In West Central Turner Valley, Brown Oil Corp. No. 3, LSD 15, section 19-19-2w5, has been definitely abandoned after protracted efforts to develop a commercial producer. It got the lime at 6,335 feet and finished at 6,771 feet. It was shot with nearly 400 quarts, but failed to show any material improvement. The test was quite close to a line of small naphtha producers on the western edge of section 20-19-2w5, and it is now believed that if the crude-producing area extends this far north it will lie somewhat farther west.

Tests in the Lime

In section 28-18-2w5, Richland Royalties No. 2, LSD 5, is being finished with standard tools below 6,832 feet, after getting the Madison limestone at 6,410 feet. It is throwing out considerable crude under heavy gas pressure, and looks like a good producer. It will probably be the next completion.

In section 20-18-2w5, Spy Hill Royalties No. 1, LSD 16, is below 6,870 feet after a short fishing job. It got the Madison limestone at 6,570 feet.

In section 32-18-2w5, Royalite Oil Co. No. 28, LSD 16, has resumed after cementing casing in the top of the lime which was struck at 6,429 feet. It is now below 6,498 feet.

West Side Drilling

In the West Central area, West Turner Petroleums No. 1, LSD 2, is below 5,000 feet, after getting the cardium sandstone marker at 4,725 feet.

In section 29-18-2w5, Davies Petroleums No. 1, LSD 2, is below 6,234 feet with the Home sand expected at 6,480 feet. Sunburst Oil Co. No. 1, N half same LSD, is in the Home sand below 6,125 feet with the Madison limestone expected around 6,800 feet.

In section 20-18-2w5, Inter City Royalties No. 1, LSD 11, sponsored by R. A. Brown, Sr., and associates, has spudded and is below 180 feet. Sunset Oils No. 2, LSD 7, is moving rotary outfit from

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California Oil Field Operations for December, 1937

According to figures collected by the American Petroleum Institute, the total production of crude oil in California for December amounted to 21,854,057 bbls., an average of 704,970 bbls. per day. This is an increase of 2,982 bbls. per day over November production.

Total stocks of crude and all products in Pacific Coast territory increased during the month 3,750,929 bbls. The total stocks at the end of the month were 128,040,247 bbls. The total stock decrease for 1937, was 3,303,489 bbls.

Eighty-one wells were completed during the month with an initial daily production of 33,406 bbls., compared with 101 wells completed during November with an initial production of 58,888 bbls.

CRUDE PETROLEUM PRODUCTION

(Figures of Production and Stocks are in barrels of 42 gallons)

Group No. 1:	Total production December	Daily average Dec., 1937	Nov., 1937	Dec., 1936
Belridge—North	500,665	16,151	16,673	14,152
Belridge—South	48,151	1,553	1,492	1,850
Canal	14,475	467	570	...
Coalinga	466,452	15,047	15,688	15,442
Edison	117,251	3,782	3,948	5,344
Elk Hills	339,816	10,962	11,001	8,408
Fruitvale	269,244	8,685	8,024	8,654
Greeley	116,919	3,772	2,818	128
Kern River	475,018	15,323	14,947	14,692
Kettleman Middle dome	2,728	88	96	235
Kettleman North dome	2,547,365	82,173	81,689	77,660
Lost Hills	114,050	3,679	4,214	3,705
McKittrick	135,134	4,359	4,506	1,749
Midway-Sunset	2,302,238	74,266	74,115	66,458
Mountian View	481,267	15,525	16,022	20,762
Mount Poso	648,611	20,923	21,010	17,907
Rio Bravo	79,321	2,559	1,617	...
Round Mountain	532,214	17,168	16,191	11,472
Ten Section	113,519	3,662	3,411	1,034
Wheeler Ridge	9,621	310	313	332
Group No. 2:				
Capitan	93,519	3,017	3,039	1,859
Elwood	237,085	7,648	7,931	10,479
Rincon	95,131	3,069	3,756	2,216
San Miguelito	114,386	3,690	3,472	2,145
Santa Barbara	17,593	567	557	764
Santa Maria	429,733	13,862	13,797	5,328
Summerland	950	31	34	35
Ventura Avenue	1,106,044	35,679	36,432	34,427
Ventura-Newhall	153,743	4,959	5,181	5,030
Watsonville	1,860	60	60	60
Group No. 3:				
Brea-Olinda	190,090	6,132	6,148	8,065
Coyote—East	126,914	4,094	4,345	2,834
Coyote—West	286,799	9,252	9,541	8,035
Dominguez	920,268	29,686	29,529	24,896
El Segundo	618,495	19,951	19,105	2,100
Huntington Beach	1,097,500	35,403	36,018	35,331
Inglewood	503,706	16,248	16,104	13,132
Lawndale	2,773	89	89	91
Long Beach	1,803,612	58,181	57,866	63,596
Los Angeles-Salt Lake	17,609	568	572	798
Montebello	224,344	7,237	7,443	8,855
Playa Del Rey	235,841	7,608	7,736	10,382
Potrero	16,606	536	418	297
Richfield	312,037	10,066	9,424	7,210
Rosecrans	173,374	5,593	4,553	2,202
Santa Fe Springs	1,271,328	41,011	41,575	44,386
Seal Beach	287,599	9,277	9,331	8,688
Torrance	236,085	7,616	7,732	9,701
Whittier	28,426	917	908	909
Wilmington	1,936,548	62,469	60,947	...
Total December	21,854,057	704,970	701,988	583,835
Total November	21,059,637	701,988		
Increase	794,420	2,982		

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	Dec. 31, '37	Nov. 30, '37	Dec. changes	Dec. 31, '36
1 Fuel oil residuum and non-gasoline-bearing crude	67,657,050	65,376,608	+2,280,442	65,487,937
2 Gas oil and diesel oil	6,819,579	7,438,542	— 618,963	8,958,060
3 Gasoline-bearing crude	30,410,671	30,078,424	+ 332,247	33,770,339
4 Unblended natural gasoline	2,001,204	2,023,555	— 22,351	1,828,636
5 Gasoline (not including distributing and service stations)	13,520,678	11,868,246	+1,652,432	12,384,540
6 Naphtha distillates	*1,464,577	*1,536,420	— 71,843	*1,387,940
7 All other stocks	†6,166,488	†5,967,523	+ 198,965	†7,526,284
Total	128,040,247	124,289,318	+3,750,929	131,343,736
* Estimated amount of unfinished gasoline contained in item 6	1,248,291	1,320,028		1,133,326
† Coke included in item 7	22,435	24,884		246,292

OIL FIELD DEVELOPMENT

Group No. 1:	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abd. wells Drillers	Abd. wells Producers
Belridge—North	1	10	0	0	50	0	0
Belridge—South	0	0	0	0	127	0	0
Canal	1	2	0	0	1	0	0
Coalinga	3	4	0	0	914	0	6
Edison	0	0	0	0	89	0	0
Elk Hills	2	1	2	153	170	0	2
Fruitvale	2	3	1	66	159	1	1
Greeley	2	9	0	0	10	0	1
Kern River	2	2	2	274	1,334	1	0
Kettleman Middle dome	0	1	0	0	3	0	0
Kettleman North dome	1	12	2	2,639	179	0	0
Lost Hills	0	1	1	106	204	0	1
McKittrick	0	1	1	55	217	0	0
Midway-Sunset	4	12	7	825	2,525	0	7
Mountain View	1	3	4	616	196	0	2
Mount Poso	1	1	3	325	278	1	0
Rio Bravo	4	3	0	0	1	0	0
Round Mountain	10	15	4	1,560	161	2	0
Ten Section	2	5	1	3,852	8	1	0
Wheeler Ridge	0	0	0	0	28	0	0
Group No. 2:							
Capitan	0	0	0	0	40	0	0
Elwood	0	0	0	0	83	0	0
Rincon	1	0	1	40	36	0	0
San Miguelito	0	1	1	125	15	0	0
Santa Barbara	0	0	0	0	36	0	1
Santa Maria	12	22	7	5,345	285	0	0
Summerland	1	0	0	0	19	0	0
Ventura Avenue	2	7	0	0	254	0	0
Ventura-Newhall	1	14	0	0	578	0	1
Watsonville	0	0	0	0	7	0	0
Group No. 3:							
Brea Olinda	0	2	0	0	347	0	0
Coyote—East	0	0	0	0	83	0	0
Coyote—West	0	1	0	0	33	0	0
Dominguez	2	6	2	490	164	0	1
El Segundo	6	13	9	7,352	49	1	1
Huntington Beach	0	1	0	0	573	0	0
Inglewood	0	1	0	0	195	0	2
Lawndale	0	0	0	0	6	0	0
Long Beach	4	9	4	1,457	1,242	0	2
Los Angeles-Salt Lake	0	0	0	0	113	0	0
Montebello	0	1	0	0	206	0	1
Newport	0	0	0	0	0	1	1
Playa Del Rey	0	0	0	0	203	0	0
Potrero	0	0	1	176	11	0	0
Richfield	3	7	1	75	282	0	0
Rosecrans	1	2	2	1,467	83	0	0
Santa Fe Springs	0	2	0	0	659	0	5
Seal Beach	0	1	0	0	109	0	0
Torrance	0	1	0	0	531	0	5
Whittier	0	0	0	0	155	0	0
Wilmington	25	30	24	6,408	348	0	0
Miscellaneous drilling	6	55	0	0	0	14	0
Group No. 4—gas fields							
Buena Vista Lake	1	0	0	0	5	0	0
Buttonwillow	0	0	0	0	16	0	0
Chowchilla	0	0	0	0	0	0	0
Delano	0	0	0	0	1	0	0
Dudley Ridge	0	0	0	0	0	0	0
Goleta	0	0	0	0	1	0	0
McDonald Island	0	1	0	0	4	0	0
Rio Vista	0	0	1	gas	11	0	0
Semi-Tropic	0	1	0	0	20	0	0
Tracy	0	0	0	0	6	0	0
Total December	101	263	81	33,406	13,463	22	40
Total November	105	249	101	58,888	13,362	20	44
Decrease (*)	4	*14	20	25,482	*101	*2	4
Avg. for year 1937	124	264	97	51,480	12,954	26	23

Brown Oil Corp. No. 3, and will spud late this month. York Oils No. 1, LSD 2, is below 1,225 feet.

In section 16-18-2w5, Frontier Royalties No. 1, LSD 11, is below 1,845 feet. Royal Canadian Oil Co. No. 2, LSD 4, is finished cellar. Okalta Oil Co. No. 7, LSD 3, is below 250 feet. Okalta No. 8, LSD 6, same section, has cable-tool equipment rigged.

In section 9-18-2w5, National Petroleum Corp. No. 2, LSD 14, is below 4,550 feet, with no change in formation. Mid-Royal Oils No. 2, LSD 3, is preparing to resume from 100 feet.

In section 17-18-2w5, Davies Petroleums No. 3, LSD 7, has resumed after setting 16-inch casing at 492 feet.

Okalta Structure

On the Okalta fold, west of Turner Valley, Okalta Oil Co. No. 6, LSD 3, section 30-18-2w5, has resumed with rotary outfit from 3,805 feet. Scottish Petroleums No. 1, LSD 16, section 19-18-2w5, is below 615 feet after running 16-inch casing to 600 feet.

New Tests Planned

On the Turner Valley west flank, Royalite Oil Co. is planning to start two additional tests. The company has No. 29 in North Turner Valley near completion, No. 28 in section 32-18-2w5 in the lime, and No. 30 in the same section well advanced. No. 31 will probably be drilled in section 29-18-2w5, immediately west of Globe Royalties No. 1, and No. 32 in the south end of the field, south of the Highwood River. Definite locations will be made in the near future.

Consolidated Royalties No. 1, LSD 14, section 20-18-2w5, sponsored by Neil McQueen and associates of Vancouver, British Columbia, is spudding. Newell & Chandler will handle the drilling contract. In the south end of the field, the Wylie-Plaxton interests of Toronto will drill D. & D. Royalties No. 1, located last year in LSD 12, section 9-18-2w5. Standard tools will be used.

In section 16-18-2w5, Brown Oil Corp. No. 5 will be started in LSD 9, using rotary tools.

North Turner Valley

In North Turner Valley, Royalite Oil Co. No. 29 Turner Basin, LSD 7, section 27-20-3w5, is below 6,469 feet after getting the Madison limestone at 6,275 feet.

In section 33-20-3w5, Home Oil Co. No. 1 Millarville, LSD 8, is being abandoned at 7,602 feet owing to crooked hole. Contract has been let to Newell & Chandler for a second test to be drilled to the Madison limestone. Location will be a half mile or more south and west of No. 1, in the SW quarter section 33-18-2w5 or SE half section 32-18-2w5. Work will begin this month.

East Side Drilling

On the Calling Valley structure, east of Turner Valley, Sentinel Oil Co. No. 1, LSD 1, section 8-20-2w5, is below 6,750 feet.

On the High River-Aldersyde structure, farther east, Ranchmen's Gas & Oil Co. No. 1, LSD 16, section 13-20-29w4, is fishing preparatory to deepening from 7,230 feet. The test is in the Dalhousie formation. Shows of white crude were met at 6,263 and 6,315 feet, a brownish crude at 6,700 feet and a greenish crude at 7,170 feet. The Madison limestone is looked for around 7,350 feet.

Tests in the Foothills

In the northern foothills west of Edmonton, Home Oil Co. No. 1 Brazeau, LSD 16, section 7-43-17w5, is below 682 feet after cementing 18-inch casing at 415 feet.

On the Birch Ridge structure, Elbow Oils No. 1, LSD 11, section 35-22-5w5, has drilled out cement at 5,314 feet preparatory to testing the brown sands of the Dalhousie formation. If commercial production is not found, drilling will be continued to test the Madison limestone.

On the Highwood-Sinclair structure, Green Valley Oils No. 1 Banner, LSD 6, section 34-17-3w5, is below 5,460 feet and will cement 6-inch casing in the Upper Madison. The log shows the test got the Fernie-Madison contact at 5,360 feet, followed by 70 feet of dense buff lime, and 20 feet of fine crystalline lime with considerable porosity, followed by 20 feet of dense lime. As soon as a sufficiently porous horizon is encountered, production string will be run.

Southwest Development Planned

British Columbia interests associated with British Pacific Oils, Ltd., of Vancouver, have subleased approximately 5,000 acres south and west of Turner Valley from Calgary & Edmonton Corp. and are planning to start development work this spring. The acreage is north of Green Valley Oils No. 1 Banner, on the Highwood-Sinclair structure, and west of the west flank development in South Turner Valley, and locations will depend largely on information and results furnished by the Green Valley and Okalta No. 6 tests.

Border Fields

In the Taber field, southern Alberta, Plains Petroleum Corp. No. 3, section 25-9-17w4, was drilled through the Ellis formation into the white lime for a deep test, after cementing 5-inch casing. It got the lime to 3,280 feet. Plains No. 2, LSD 11, same section, is shipping crude accumulated in the storage tanks. Rig from Plains No. 1, abandoned owing to production difficulties, will be moved to a new location for No. 4.

South of Magrath, Frank Lyons No. 1 on the McIntyre ranch, LSD 14, section 19-3-21w4, has resumed from 2,250 feet with 15½-inch hole after replacing derrick destroyed by fire. A gas engine has been installed to supply power.

Saskatchewan Operations

In the Kamsack shallow gas field, in southeastern Saskatchewan close to the Manitoba boundary, Coal Gate Oils, Ltd., of Regina, has finished four shallow gassers, with production ranging up to 100,000 feet a day each. The company is planning a series of 20 or more wells in this area. Gates Petroleum, Ltd., is preparing for some drilling this summer in the same area, in addition to completing a deep test near Pilot Mound, on the Manitoba side of the boundary. Northern Royalties, Ltd., has started a hole with 12-inch casing to test the deeper formations in the Kamsack area. The Canadian National Railways is drilling a test on its property at Kamsack to secure gas for its own terminal requirements.

Ontario Operations

In the Dover field, Kent County, Ontario, Prairie Oil & Gas Co. No. 6, Orville Crow farm, Lot 6, Front Concession, Raleigh Township, is below 600 feet on a deep test of the Trenton limestone.

In Camden Township, Kent County, E. A. Roth No. 1, Lot 9, Concession 2, finished around 325 feet after drilling through a shallow oil horizon from 308 feet. The well showed a flush production of 35 bbls. of oil in the first 24 hours, and has been put on the pump. Roth No. 2 has been rigged on the same lease.

In the Tilbury field, Kent County, Union Gas Co. No. 296, SW Lot 160, North Talbot Road, Raleigh Township, finished below 1,300 feet with a natural production of 100,000 feet a day. A shot increased this to about 250,000 feet.

In the Brownsville field, Oxford County, Central Pipe Line Co. No. 2, Thomas R. Farrow farm, Lot 26, Concession 11, Dereham Township, has set casing on top of the sand at about 900 feet and is drilling into production.

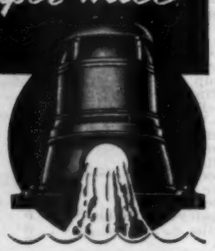
Drilling Contractors

(Continued from Page 91)

Cron & Gracey have reached a depth of 11,347 feet in the Lake Long field on Fohs Oil Co. No. 3 State. Other operations are reported in the Gibson field for Shell Petroleum Corp.; at the Dickinson field for Stanolind Oil & Gas Co., and at Tomball for Amerada Petroleum Corp. and Stanolind Oil & Gas Co.

Book Notice

The University of California Press has recently published a book on "Methods in Paleontology" edited by Charles L. Camp and G. Dallas Hanna. This is a manual of field and laboratory methods in the collection and preparation of vertebrate and invertebrate material. The instructions given should prove of interest to those engaged in the collection of fossils. The book is divided into two parts the first part dealing with Vertebrates by Dr. Camp and the second part on Invertebrates by Dr. Hanna. Copies are available from the University of California Press, Berkeley, Calif., for $2.50 each.



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WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Dcpth	Status
Wilshire Oil Co., No. 1 Gaviota, Santa Barbara	35- 5-33	1,265	sd. sh. drlg.
Hancock-Bush, No. 2-W Santa Maria, Santa Barbara	30-10-33	3,841	sd. sh. drlg.
Hancock-Bush, No. 2-R Santa Maria, Santa Barbara	25-10-34	3,490	sd. sh. drlg.
Anderson, J., No. 1 A.&T., Santa Maria, Santa Barbara	28-10-34	4,193	sd. sh. drlg.
Cal. Lands, Inc. No. 3 Santa Maria, Santa Barbara	26-10-34	1,998	sd. sh. drlg.
Moore, E. H., No. 13-E Sugar, Santa Maria, Santa Bar.	24-10-35	5,284	sd. sh. drlg.
Signal O., No. 2 Romalho, Santa Maria, Santa Barbara	27-10-34	4,101	sd. sh. drlg.
Union Oil, No. 2-V Santa Maria, Santa Barbara	21-10-34	1,971	sd. sh. drlg.
Union Oil, No. 3 Mor, Santa Maria, Santa Barbara	24-10-34	2,805	pump. 135 b.d.
Union Oil, No. 2-B Santa Maria, Santa Barbara	24-10-34	2,615	pump 148 b.d.
Union Oil, No. 2-0, Santa Maria, Santa Barbara	20-10-34	1,461	sd. sh. drlg.
Union Oil, No. 1 Wheat, Santa Maria, Santa Barbara	22-10-34	4,181	sd. sh. drlg.
Union Oil, No. 17 Cal. Coast, Orcutt, Santa Barbara	26- 9-34	4,515	pump 50 b.d
Union Oil, No. 20 Squires, Orcutt, Santa Barbara	27- 9-34	4,096	sd. sh. drlg.
Pet. Equities, No. 15 Santa Maria, Santa Barbara	27-10-34	1,774	sd. sh. drlg.
Cole, F. E., No. 16 Santa Maria, Santa Barbara	23-10-34	3,315	pump 100 b.d.
Jones, F. E., No. 1-W, Santa Maria, Santa Barbara	27-10-34	4003	sd. sh. drlg.
Pac. West. Oil, No. 3-D, Santa Maria, Santa Barbara	27-10-34	4,198	sd. sh. drlg.
Pima Drlg., No. 1 Morganti, Casmalia, Santa Barbara	13- 9-35	1,800	bailing
Standard Oil, No. 1 Cat Canyon, Santa Barbara	27- 9-33	4,440	sd. sh. drlg.
Bell, A. E., No. 4 York, Lompoc, Santa Barbara	33- 8-34	2,750	sd. sh. drlg.
Moyle Pet., No. 1 Gato Ridge, Santa Barbara	9- 8-32	3,270	redrlg. 3,165
Fisher, D., No. 1 Cuyama, Santa Barbara	28-11-28	958	hd. sh. drlg.
High Mesa Oil Co., No. 1 Butcher, Ojai, Ventura	16- 4-22	1,325	hd.sd. drlg.
Texas Co., No. 5 Yale, South Mountain, Ventura	13- 3-21	1,975	cmtd. 1,904
Richfield Oil, No. 1 McFarland, Camarillo, Ventura	13- 2-21	7,883	dry; abd.
Texas Co., No. 1 Edwards, Camarillo, Ventura	19- 2-21	6,111	fish D.P.
Stalling & Senter, No. 1 Timber Canyon, Ventura	24- 4-21	672	O.S. drlg.
Arnett, F. E., No. 3 Santa Paula, Ventura	15- 4-21	1,401	sd. sh. drlg.
Section 20 Oil Co., No. 1 Sespe, Ventura	20- 5-19	1,607	hd. sh. drlg.
Garmack Oil Co., No. 1 Orcutt, Sespe, Ventura	28- 5-19	503	br. sh. drlg.
Condor Oil Co., No. 1 Dorman, Sespe, Ventura	6- 4-19	2,193	swedging
Skyline Oil Co., No. 1-H Hopper Canyon, Ventura	13- 4-19	2,771	sd. sh. drlg.
Continental, No. 8-A Grubb, San Miguelito, Ventura	24- 3-24	6,700	acidizing
C. C. M. Oil Co., No. 11 Rincon, Ventura	17- 3-24	3,760	cleaning out
C. C. M. Oil Co., No. 19 Rincon, Ventura	17- 3-24	1,977	sd. sh. drlg.
C. C. M. Oil Co., No. 20 Rincon, Ventura	8- 3-24	2,981	sd. sh. drlg.
Richfield Oil Corp., No. 1 State, Rincon, Ventura	17- 3-24	2,580	tested wet
General Pet. Corp., No. 3 Ferguson, Rincon, Ventura	6- 3-24	2,610	deepening
Tide Water A. O. Co., No. 19 V.L.W., Ventura, Ventura	26- 3-23	6,050	sd. sh. drlg.
Tide Water A. O. Co., No. 41 V.L.W., Ventura, Ventura	24- 3-23	6,020	sd. sh. drlg.
Tide Water A. O. Co., No. 69 Lloyd, Ventura, Ventura	27- 3-23	6,015	sd. sh. drlg.
Tide Water A. O. Co., No. 79 Lloyd, Ventura, Ventura	27- 3-23	4,990	sd. sh. drlg.
Tide Water A. O. Co., No. 135 Lloyd, Ventura, Ventura	27- 3-23	9,475	hd. sh. drlg.
Tide Water A. O. Co., No. 138 Lloyd, Ventura, Ventura	23- 3-23	8,384	hd. sd. drlg.
Tide Water A. O., No. 18 Hartman, Ventura, Ventura	22- 3-23	10,093	O.S. drlg.
Shell Oil Co., No. 93 Taylor, Ventura Ave., Ventura	30- 3-23	6,898	sd. sh. drlg.
General Pet., No. 13 Notten, Ventura Ave., Ventura	28- 3-23	9,871	C.P. 9,527-33
Amerada Pet. Corp., No. 5 Beer, Devils Den, Kern	22-26-19	6,717	fish D.P.
Gibson Oil Co., No. 3 Alferitz, Devils Den, Kern	14-25-18	198	sd. sh. drlg.
Rocima Oil Co., No. 1 Laymance, McKittrick, Kern	20-30-22	3,122	P.B. 1,420
Par-Mer Oil Co., No. 1 McKittrick, Kern	6-31-30	2,064	cleaning out
Standard Oil Co., No. 2 Randolph, Semi-Tropic, Kern	14-27-23	9,570	gr. sh. drlg.
Continental Oil Co., No. 2 KCL, Wasco, Kern	8-27-24	13,090	hd. sh. drlg.
Chico-Martinez Oil Co., No. 1 South Belridge, Kern	1-29-20	1,066	P.B. 1,026
Texas Co., No. 2-23 Theta, Lost Hills, Kern	2-26-20	1,255	sd. sh. drlg.
Belridge Oil Co., No. 27-7 North Belridge, Kern	27-27-20	7,372	br. sd. drlg.
Belridge Oil Co., No. 27-8 North Belridge, Kern	27-27-20	8,055	tested wet
Belridge Oil Co., No. 27-61 North Belridge, Kern	27-27-20	8,750	tested wet
Belridge Oil Co., No. 28-1 North Belridge, Kern	28-27-20	8,450	flow 1,460 b.d.
Tide Water A. O., No. 7 Reward, North Belridge, Kern	34-27-20	7,999	br. sh. drlg.
Tide Water A. O., No. 1-21 North Belridge, Kern	21-27-20	7,994	sd. sh. drlg.
Tide Water A. O., No. 2-21 North Belridge, Kern	21-27-20	8,004	br. sh. drlg.
Richfield Oil Corp., No. 1-A North Belridge, Kern	22-27-20	6,862	br. sh. drlg.
Texas Co., No. 2 Martin, North Belridge, Kern	22-27-20	8,045	br. sh. drlg.
Texas Co., No. 3 Martin, North Belridge, Kern	22-27-20	5,377	br. sh. drlg.
General Pet. Corp., No. 1 St. Helens, Belridge, Kern	12-28-20	7,460	br. sh. drlg.
Johnson, G. W., No. 1 Brown, Temblor, Kern	33-29-20	1,015	idle
Tampico Pet. Co., No. 5 B.&G., Round Mountain, Kern	17-28-29	1,848	pump 298 b.d.
Richfield Oil, No. 1 Oicese, Round Mountain, Kern	17-28-29	1,591	redrlg. 1,272
Shell Oil, No. 18 Caldwell, Round Mountain, Kern	7-28-29	1,970	P.B. 1,940
Coast Expl. Co., No. 1 Coffee, Round Mountain, Kern	6-28-29	1,355	sd. sh. drlg.
Vedder Pet. Corp., No. 1 Bell, Round Mountain, Kern	12-28-28	1,736	O.S. drlg.
Rubenstein, A. B., No. 1 Lerdo, Kern	20-28-27	3,369	P.B. 3,352
Dickey, H. B., No. 1 Kern River, Kern	34-28-28	480	sd. sh. drlg.
Pottenger, F. M., No. 1 Gerrard, Mount Poso, Kern	3-26-28	1,042	dry; abd.
Pottenger, F. M., No. 1 Orcier, Mount Poso, Kern	34-25-28	117	sd. sh. drlg.
Carter, J. P., No. 2 S.P.L., Mount Poso, Kern	3-27-28	1,473	fish. liner
Golden Bear Oil Co., No. 3 McVan, Mount Poso, Kern	10-27-27	1,503	wet; abd.
Pebble Beach Oil, No. 6 Newhope, Mount Poso, Kern	29-27-27	2,653	pump 60 b.d.
Bargol Oil Co., No. 2 Claflin, Mount Poso, Kern	10-27-27	916	sd. sh. drlg.
Ring Oil Co., No. 2 Jones, Mount Poso, Kern	29-26-28	1,753	rig to pump
Ring Oil Co., No. 1 KCL, Mount Poso, Kern	16-26-28	1,098	sd. sh. drlg.
Western Gulf Oil, No. 32-B KCL, Fruitvale, Kern	14-29-27	3,034	flow 481 b.d.
Cal-West. Oil Co., No. 1 KCL, Fruitvale, Kern	14-29-27	3,551	P.B. 3,511
Wood Callahan Oil Co., No. 21-2 Edison, Kern	1-30-29	1,385	sd. sh. drlg.
Texas Co., No. 1 Bastain, Mountain View, Kern	34-30-29	4,641	gr. sd. drlg.
Hogan Pet. Co., No. 5 Symons, Mountain View, Kern	4-31-29	6,172	flow 218 b.d.
Petrex, Inc., No. 1 Arvin, Kern	32-31-30	3,140	rebldg. rig
Superior Oil Co., No. 1 Wagner, Rio Bravo, Kern	35-28-25	10,162	br. sh. drlg.
Superior Oil Co., No. 2 Wagner, Rio Bravo, Kern	35-28-25	3,050	sd. sh. drlg.
Superior Oil Co., No. 1 Geissinger, Rio Bravo, Kern	3-28-25	8,970	sd. sh. drlg.
Superior Oil Co., No. 1 Ruhl, Rio Bravo, Kern	1-29-25	7,674	sd. sh. drlg.
Union Oil Co., No. 2-34 KCL, Rio Bravo, Kern	34-28-25	9,946	sd. sh. drlg.
Getty Oil Co., No. 1 Ramsey, Rio Bravo, Kern	35-28-25	3,798	sd. sh. drlg.
General Pet. Corp., No. 1 Wagoner, Rio Bravo, Kern	35-28-25	3,040	sd. sh. drlg.
Shell Oil Co., No. 58-A KCL, Bellevue, Kern	29-29-27	3,996	sd. sh. drlg.
Continental Oil Co., No. 1-D KCL, Greeley, Kern	10-30-26	3,794	sd. sh. drlg.
Superior Oil Co., No. 9 KCL, Greeley. Kern	3-30-26	7,870	redrlg. 3,598
Standard Oil Co., No. 1 Calder Klassen, Greeley, Kern	20-29-26	7,398	sd. sh. drlg.
Standard Oil Co., No. 2 Fleishauer, Greeley, Kern	20-29-26	5,962	sd. sh. drlg.
Standard Oil Co., No. 11-2 KCL, Greeley, Kern	20-29-26	9,697	sd. sh. drlg.
Standard Oil Co., No. 11-12 KCL, Greeley, Kern	20-29-26	7,902	redrlg. 6,285
Standard Oil Co., No. 12-4 KCL, Greeley, Kern	16-29-26	7,294	sd. sh. drlg.
Shell Oil Co., No. 8-29-A KCL, Ten Section, Kern	29-30-26	4,677	sd. sh. drlg.
Shell Oil Co. No. 85-25-B KCL, Ten Section, Kern	25-30-26	8,220	O.S. drlg.
Shell Oil Co., No. 41-32-B KCL, Ten Section, Kern	32-30-26	6,763	sd. sh. drlg.
Shell Oil Co. No. 52-31-B KCL, Ten Section, Kern	31-30-26	7,996	sd. sh. drlg.
Shell Oil Co., No. 72-14-A KCL, Canal, Kern	14-30-25	8,036	redrlg. 7,890
Ohio Oil Co., No. 4-E KCL, Canal, Kern Co.	13-30-25	8,177	O.S. drlg.
Ohio Oil Co., No. 8-A KCL, Buena Vista Lake, Kern	32-31-26	5,897	sd. sh. drlg.
Merritt-Annex Oil Co., No. 7 Midway-Sunset, Kern	25-12-24	3,420	hd. sd. drlg.
Richfield Oil Corp., No. 1 M. C. Midway-Sunset, Kern	24-31-22	2,346	sd. sh. drlg.
Berry Oil Co., No. 22 Midway-Sunset, Kern	28-12-24	398	sd. sh. drlg.
Chemeketa Oil Corp., No. 1 Midway-Sunset, Kern	15-32-23	2,407	P.B. 2,353
Standard Oil Co., No. 35-23-D, Midway-Sunset, Kern	23-32-24	1,993	sd. sh. drlg.
Victor Oil Co., No. 14 Midway-Sunset, Kern	35-32-23	2,640	br. sh. drlg.
National Oil Co., No. 17 Midway-Sunset, Kern	35-32-23	1,200	redrlg. 992
Texas Co., No. 1 Pioneer, Midway-Sunset, Kern	33-11-23	6,894	gr. sd. drlg.
Texas Co., No. 30 Midway-Sunset, Kern	32-32-24	3,245	fish. bailer
Richfield Oil Corp., No. 1-D-A, Elk Hills, Kern	1-31-24	3,025	pump 50 b.d.
Standard Oil Co. No. 2-14-A Tupman, Elk Hills, Kern	36-30-24	2,995	rig to pump
Petrol Corp., No. 1 Tejon, Kern	32-11-19	5,170	br. sh. drlg.
Honolulu Oil Corp., No. 33-1 SP, Tejon, Kern	33-12-19	7,699	sd. sh. drlg.
Universal Cons'd., No. 1 Tejon, Kern	33-11-19	4,988	P.B. 4,634
Shell Oil Co., No. 4-26 KCL, San Emidio, Kern	26-11-22	7,140	sd. sh. drlg.
Pure Oil Co., No. 1 Cantua, Fresno	31-18-18	10,415	milling
Union Oil Co., No. 1 Nicholson, Cantua, Fresno	17-15-15	7,063	dry; abd.
West. Gulf Oil Co., No. 4 S.P.L. Cantua, Fresno	3-17-15	6,754	dry; abd.
Superior Oil Co., No. 1 C.U.P., Fresno	20-16-13	3,976	sd. sh. drlg.
Dauphin Dev. Co., No. 1 Alcade, Fresno	30-21-14	3,778	salt water
Jacalitos Oil Co., No. 1 Jacalitos, Fresno	14-21-15	5,870	redrlg. 4,596
Pet. Sec. Co. No. 2 Gatchell, Jacalitos, Fresno	18-20-16	5,270	bl. sh. drlg.
Central Valley Oil Co., No. 1 Joaquin, Fresno	1-12-20	536	gr. sd. drlg.
K. N. D. A., No. 4-18-J Kettleman North, Fresno	18-21-17	10,810	cleaning out
K. N. D. A., No. 67-20-J Kettleman North, Fresno	20-21-17	8,195	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
Cd., or Crd., cored.
C.D., corrected depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtr., or St. sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting for cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

K. N. D. A., No. 72-4-P Kettleman North, Fresno	4-22-17	7,260	br. sh. drlg.
K. N. D. A., No. 38-12-P Kettleman North, Kings	12-22-17	8,080	flow 619 b.d.
K. N. D. A., No. 6-6-Q Kettleman North, Kings	6-22-18	8,690	P.B. 8,189
K. N. D. A., No. 6-8-Q Kettleman North, Kings	8-22-18	5,270	sd. sh. drlg.
K. N. D. A., No. 58-16-Q Kettleman North, Kings	16-22-18	....	bldg. rig.
K. N. D. A., No. 47-18-Q Kettleman North, Kings	18-22-18	3,291	sd. sh. drlg.
Standard Oil Co., No. 27-21-J Kettleman North, Fresno	21-21-17	9,897	hd. sd. drlg.
Standard Oil Co., No. 58-33-J Kettleman North, Fresno	33-21-17	3,540	sd. sh. drlg.
Standard Oil Co., No. 2-11-P Kettleman North, Kings	11-22-17	7,850	flow salt wtr.
Standard Oil Co., No. 76-1-P Kettleman North, Kings	1-22-17	8,474	hd. sd. drlg.
Standard Oil Co., No. 87-1-P Kettleman North, Kings	1-22-17	3,992	sd. sh. drlg.
Standard Oil Co. No. 21-13-P Kettleman North, Kings	13-22-17	6,980	br. sh. drlg.
Standard Oil Co., No. 41-7-Q Kettleman North, Kings	7-22-18	6,196	br. sh. drlg.
Superior O., No. 5 Huffman, Kettleman North, Fresno	29-21-17	10,746	C.P. 10,319
Bandini, No. 5 Whepley, Kettleman North, Fresno	35-21-17	9,397	sd. sh. drlg.
Friend, C. C., No. 1 Tulare Lake, Kings	17-22-19	442	sd. sh. drlg.
Pyramid Prod. Co., No. 1 Kettleman Plains, Kings	27-24-18	1,890	sd. sh. drlg.
Amerada Pet. Co., No. 1 Carano, Los Banos, Merced	19-10-11	8,385	dry; abd.
Standard, No. 2 Weyl, McDonald Island, San Joaquin	25- 2- 4	8,063	gr. sd. drlg.
Crusaders Oil Co., No. 1 Ducor, Tulare	1- 4-27	....	rigged up
Little Cuyama Oil, No. 1 Elkhorn, San Luis Obispo	4-10-26	1,230	sd. sh. drlg.
Wilshire, No. 1 Cowell, Half Moon Bay, San Mateo	20- 6- 5	7,285	sd. sh. drlg.
Ohio Oil Co, No. 1-A Willard, Willows, Glenn	18-20- 2	....	rig
Amerada Pet. Co., No. 1 McCormick, Rio Vista, Solano	1- 3- 2	4,382	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
Richfield Oil Corp., No. 1-H El Segundo, Los Angeles	7- 3-14	7,496	pump 25 b.d.
Apex Pet. Corp., No. 1-C El Segundo, Los Angeles	12- 3-15	7,318	sd. sh. drlg.
Sovereign Oil Corp., No. 1 El Segundo, Los Angeles	12- 3-15	5,280	sd. sh. drlg.
The Termo Co., No. 2 El Segundo, Los Angeles	12- 3-15	7,096	sd. sh. drlg.
Ohio Oil Co., No. 11 Gough, El Segundo, Los Angeles	7- 3-14	6,971	sd. sh. drlg.
Texas Co., No. 6 Security, El Segundo, Los Angeles	18- 3-14	7,315	rig to pump
Standard Oil, No. 8 Refinery, El Segundo, Los Angeles	13- 3-15	7,092	sd. sh. drlg.
Wilshire Oil, No. 1 Const., El Segundo, Los Angeles	12- 3-15	7,020	sd. sh. drlg.
Wilshire Oil, No. 2-1 Elsie, El Segundo, Los Angeles	12- 3-15	7,250	pump 335 b.d.
Union Oil, No. 16-D. R., Playa Del Rey, Los Angeles	28- 2-15	6,099	redrlg. 6,074
Standard Oil Co., No. 84 L. I. Inglewood, Los Angeles	17- 2-14	4,175	P.B. 3,615
Phalen & Pietzschke, No. 1 Torrance, Inglewood	14- 4-14	3,790	will deepen
Pollock & O'Neil, No. 21 Torrance, Los Angeles	14- 4-14	3,800	cleaning out
McCaslin, W. E., No. 2 Torrance, Los Angeles	14- 4-14	3,805	will deepen
Patton, C. B., No. 2 Torrance, Los Angeles	14- 4-14	4,995	sd. sh. drlg.
Anderson, N. H., No. 2 Torrance, Los Angeles	14- 4-14	4,571	sd. sh. drlg.
Anderson, N. H., No. 4 Torrance, Los Angeles	23- 4-14	4,762	sd. sh. drlg.
Emerald Oil Co., No. 1 fee, Torrance, Los Angeles	23- 4-14	5,145	sd. sh. drlg.
Camp, C. W., No. 1 Perkins, Torrance, Los Angeles	23- 4-14	4,191	sd. sh. drlg.
Doyle Pet. Co., No. 1 Bond, Torrance, Los Angeles	14- 4-14	2,587	sd. sh. drlg.
Elyod Oil Co., No. 1 Post, Torrance, Los Angeles	14- 4-14	3,774	will deepen
Woolner Oil Co, No. 5 Torrance, Los Angeles	14- 4-14	4,215	sd. sh. drlg.
Texas Co., No. 5 Redondo, Torrance, Los Angeles	5- 4-14	3,370	will deepen
Texas Co., No. 3 Wilson, Torrance, Los Angeles	15- 4-14	3,759	cleaning out
M. & M. Oil Co., No. 6-L Torrance, Los Angeles	22- 4-12	4,296	sd. sh. drlg.
Albertson Oil Co., No. 1-P Torrance, Los Angeles	23- 4-14	5,115	sd. sh. drlg.
Superior Oil Co., No. 5 Torrance, Los Angeles	16- 5-14	3,730	cleaning out
Coast Line Oil Co. No. 1 Torrance, Los Angeles	16- 4-14	3,775	will deepen
C. C. M. A. Co., No. 14 Torrance, Los Angeles	16- 4-14	4,015	deepening
Grubb, E. H., No. 2 Torrance, Los Angeles	14- 4-14	4,927	O.S. drlg.
Fisher, H., No. 1 Watkins, Torrance, Los Angeles	23- 4-14	5,040	sd. sh. drlg.
Fisher, H., No. 1 Washburn, Torrance, Los Angeles	16- 4-14	5,018	sd. sh. drlg.
Rolling Hills Pet., No. 1 Palos Verdes, Los Angeles	27- 4-14	3,900	sd. sh. drlg.
Shell Oil Co., No. 18 Reyes, Dominguez, Los Angeles	33- 3-13	4,150	pump 120 b.d.
Shell Oil Co., No. 93 Reyes, Dominguez, Los Angeles	33- 3-13	7,016	P.B. 6,855
Union Oil, No. 49 Heliman, Dominguez, Los Angeles	33- 3-13	6,724	sd. sh. drlg.
Union Oil, No. 58 Callender, Dominguez, Los Angeles	33- 3-13	4,714	sd. sh. drlg.
Union Oil, No. 59 Callender, Dominguez, Los Angeles	33- 3-13	4,491	sd. sh. drlg.
Barnsdall Oil, No. 20 O'Dea, Rosecrans, Los Angeles	18- 3-13	....	rig
Union Oil, No. 35 H. P., Rosecrans, Los Angeles	18- 3-13	10,397	P.B. 4,970
Union Oil Co., No. 18-R Rosecrans, Los Angeles	18- 3-13	6,991	sd. sh. drlg.
Universal Cons'd., No. 2 Trust, Rosecrans	18- 3-13	1,697	sd. sh. drlg.
Texas Co., No. 5-1 Gardena, Los Angeles	30- 3-13	7,274	sd. sh. drlg.
Barnsdall Oil Co., No. 2-S.F., Newhall, Los Angeles	26- 4-17	6,712	flow 1,650 b.d.
Towsley Canyon Oil Co., No. 1 Newhall, Los Angeles	8- 3-16	4,105	perf. csg.
Royal Lands, No. 1 Ramona, Castaic, Los Angeles	8- 4-17	366	idle
General Pet., No. 2 Blinn, Wilmington, Los Angeles	35- 5-13	2,750	sd. sh. drlg.
General Pet., No. 34 Ford, Wilmington, Los Angeles	4- 5-13	2,531	sd. sh. drlg.
General Pet., No. 37 Ford, Wilmington, Los Angeles	4- 5-13	2,550	sd. sh. drlg.
General Pet., No. 1 Harbor, Wilmington, Los Angeles	3- 5-13	3,939	cleaning out
General Pet., No. 2 Harbor, Wilmington, Los Angeles	2- 5-13	2,600	sd. sh. drlg.
General Pet., No. 5 Harbor, Wilmington, Los Angeles	2- 5-13	2,186	sd. sh. drlg.
General Pet., No. 7 Harbor, Wilmington, Los Angeles	2- 5-13	2,820	sd. sh. drlg.
Allied Pet., No. 24 Wilmington, Los Angeles	32- 4-13	2,650	sd. sh. drlg.
Bankline Oil Co., No. 3-U.P., Wilmington, Los Angeles	3- 5-13	2,177	sd. sh. drlg.
Bankline Oil Co., No. 4-U.P., Wilmington, Los Angeles	3- 5-13	3,012	O.S. drlg.
Bankline Oil Co., No. 5-U.P., Wilmington, Los Angeles	2- 5-13	2,481	sd. sh. drlg.
Baker Oil Co., No. 1 Wilmington, Los Angeles	35- 4-13	3,078	cmtd. 3,077
Black Gold Corp., No. 7 Wilmington, Los Angeles	32- 4-13	3,636	pump 180 b.d.
Caminol Co., No. 1-6-H Wilmington, Los Angeles	2- 5-13	3,050	flow 440 b.d.
Colter & McAdoo, No. 4 Wilmington, Los Angeles	32- 4-13	3,646	flow 310 b.d.
Hancock Oil Co., No. 1-A Wilmington, Los Angeles	2- 5-13	3,900	flow 3,840
Hancock Oil Co., No. 2-A Wilmington, Los Angeles	2- 5-13	2,650	sd. sh. drlg.
L. B. Harbor, No. 1-CC, Wilmington, Los Angeles	2- 5-13	3,805	O.S. drlg.
Macson Oil Co., No. 2-C Wilmington, Los Angeles	32- 4-13	3,638	cleaning out
Pongratz, Gus, No. 2-A Wilmington, Los Angeles	32- 4-13	1,997	sd. sh. drlg.
Richfield Oil Corp., No. 1-G Wilmington, Los Angeles	2- 5-13	4,470	sd. sh. drlg.
Richfield Oil, No. 2-P.G., Wilmington, Los Angeles	2- 5-13	3,120	pump 148 b.d.
Richfield Oil, No. 1-S.D., Wilmington, Los Angeles	35- 4-13	3,340	sd. sh. drlg.
Superior Oil Co., No. 1-B.B., Wilmington, Los Angeles	4- 5-13	2,598	sd. sh. drlg.
Superior Oil Co., No. 5-B.B., Wilmington, Los Angeles	4- 5-13	2,596	sd. sh. drlg.
Superior Oil, No. 14-B.B., Wilmington, Los Angeles	4- 5-13	2,670	sd. sh. drlg.
Texas Co., No. 2 Ref., Wilmington, Los Angeles	32- 4-13	3,472	sd. sh. drlg.
Union Pacific R. R., No. 46 Wilmington, Los Angeles	33- 4-13	2,669	sd. sh. drlg.
Union Pacific R. R., No. 49 Wilmington, Los Angeles	34- 4-13	2,960	sd. sh. drlg.
Union Pacific R. R., No. 51 Wilmington, Los Angeles	34- 4-13	2,171	fishing
Union Pacific R. R., No. 71 Wilmington, Los Angeles	34- 4-13	1,873	sd. sh. drlg.
Union Pacific R. R., No. 72 Wilmington, Los Angeles	34- 4-13	1,791	sd. sh. drlg.
Union Pacific R. R., No. 75 Wilmington, Los Angeles	34- 4-13	3,140	flow 650 b.d.
Johnston Drlg., No. 1 Montebello, Los Angeles	5- 2-11	1,982	sd. sh. drlg.
St. Helens Pet., No. 24-M, Montebello, Los Angeles	2- 2-12	2,496	sd. sh. drlg.
Union Oil Co., No. 4 Flood Control, Los Angeles	13- 4-13	4,408	sd. sh. drlg.
Abrams, John, No. 1 Flood Control, Los Angeles	13- 4-13	4,230	pump water
Texas Co., No. 5 Bauman, Long Beach, Los Angeles	19- 4-12	4,730	pump 180 b.d.
Texas Co., No. 4 Gray, Long Beach, Los Angeles	20- 4-12	4,415	pump water
Powers, E. D., No. 3 Long Beach, Los Angeles	20- 4-14	4,303	sd. sh. drlg.
Sunset Oil, No. 1 Whitney, Long Beach, Los Angeles	19- 4-12	2,194	sd. sh. drlg.
Shell Oil Co., No. 1 Hath, Long Beach, Los Angeles	28- 4-12	6,400	idle
Shell Oil Co., No. 15-C, Long Beach, Los Angeles	19- 4-12	3,200	sd. sh. drlg.
Richfield Oil, No. 4-B, Long Beach, Los Angeles	13- 4-13	1,187	sd. sh. drlg.
Richfield Oil, No. 6-M.D., Long Beach, Los Angeles	19- 4-12	2,784	pump 25 b.d.
Union Oil, No. 100, Santa Fe Springs, Los Angeles	6- 3-11	11,314	cleaning out
Continental, No. 40 Bixby, Seal Beach, Orange	2- 5-12	7,501	redrlg. 6,570
W. P. R. Oil Co., No. 3 Huntington, Orange	35- 5-11	6,370	sd. sh. drlg.
Lido Pet. Co., No. 1 Severns, Huntington, Orange	34- 4-11	3,801	pulled pipe
Pressel & Tull, No. 1 Puente Hills, Orange	30- 2- 9	4,600	idle
Brea Canyon Oil Co., No. 48 Brea Canyon, Orange	2- 3-10	1,181	sd. sh. drlg.
Standard Oil, No. 127 Murphy, West Coyote, Orange	18- 3-10	3,240	cmtd. 3,224
Union Oil, No. 29 Chapman, Richfield, Orange	29- 3- 9	10,496	P.B. 4,678
Standard Oil, No. 26 Kraemer, Richfield, Orange	32- 3- 9	3,095	sd. sh. drlg.
Oil Income Corp., No. 1 Anderson, Yorba, Orange	22- 3- 9	2,182	P.B. 1,765
Berco Oil Co. No. 1 Milhaus, Yorba, Orange	22- 3- 9	1,750	pump off
Angelus Oil Co., No. 1 Jacobs, Yorba, Orange	22- 3- 9	1,676	pump 101 b.d.
Fairfield, F. E., No. 1 Dutton, Yorba, Orange	22- 3- 9	1,662	bailing
Perl, J., Oil Co., No. 1-D Yorba, Orange	21- 3- 9	1,000	sd. sh. drlg.
Beth Pet. Co., No. 1 Pickering, Yorba, Orange	21- 3- 9	1,850	sd. sh. drlg.
Selegna Oil Co., No. 1-A Chino, San Bernardino	12- 3- 8	2,550	gr. sd. drlg.

KANSAS

Week Ending February 12 (Descriptions are East unless marked otherwise)

Barber County

Carter Oil Co. et al No. 1 Ely, C NE NW sec. 6-32-14w. Drlg. 2,080 ft.

Palmer Oil Corp. et al No. 1 Warwick, C NW sec. 29-31-10w. Drlg. 3,205 ft.

Barton County

Crown Oil Co. No. 1 Schwartz, NW sec. 7-20-11w. Drlg. 860 ft.

R. E. Day et al No. 1 Felts, SE SE NE sec. 14-16-12w. S.D. 1,875 ft.

Martin & Foraker et al No. 1 Dick Est., NE SW SW sec. 31-19-11w. Rig.

C. L. Price No. 1 Hammeke, NE NE SW sec. 12-18-12w. Sil. 3,415-27 ft.; swb. 15 B.O. and 2 B.W. P.D.

Sinclair Prairie Oil Co. No. 1 Frederick, SW SW SE sec. 16-16-11w. R.U.

Sinclair Prairie Oil Co. No. 1 Oser, NE SE sec. 17-16-11w. Sd. 3,274-78 ft., T.D.: set 5-in. csg. 3,023 ft.; drlg. plugs.

Texas Co. No. 1 Lowry, CNL NW SW sec. 2-17-13w. Drlg. 2,685 ft.

Butler County

T. S. Dustin No. 1 Miley, SE NW NE sec. 17-27-5e. S.D. 395 ft.

Steinbuchel et al No. 1 Fox, NW SE NE sec. 25-26-3e. S.D. 1,010 ft.

Chase County

T. D. Duffy No. 1 Leedy, NE NW NW sec. 26-22-9. S.D. 1,300 ft.

Chautauqua County

Harrison No. 1 Brown, NE SE NE sec. 19-34-10. S.D. 820 ft., T.D.; abd.

I. W. Siegel No. 1 Temple, SW cor. sec. 31-32-12. S.D. 400 ft.; D.&A.

Clark County

Olson Oil Co. No. 1 Lehman, SE SW sec. 20-32-31w. Viola 6,433 ft.; S.S.O. 6,480-81 ft.

Olson Oil Co. et al No. 1 Watkins, SW NW sec. 23-32-21w. Arb. 6,700-60 ft., T.D. 6,857 ft.; set 7-in. 6,798 ft.; to test.

Cowley County

Arthur Brewer No. 1 Clark, NE SE NW sec. 6-31-4. Drlg. 2,000 ft.

Dickey Oil Co. No. 1 Kansas G. & E., NE cor. sec. 22-34-3e. Drlg. 3,442 ft.

Tom Palmer No. 1 Neimaller, NE cor. sec. 14-30-4e. Drlg. 1,400 ft.

Trees Oil Co. and Talbott No. 1 McMinn, NE NW sec. 16-31-6. Drlg. 2,150 ft.

Ellis County

Colonial Oil Co., Trott et al No. 1 Hadley, SE NE SE sec. 12-11-18w. K.C. 3,045 ft.; T.D. 3,146 ft.; recmtg. csg.

Hays & Sackrider No. 1 Windholtz, NE cor. sec. 2-13-16w. Drlg. 2,860 ft.

J. J. Muth et al No. 1 Penney, C N½ NE SE sec. 29-14-18w. S.D. 350 ft.

Ellsworth County

Cities Service Oil Co. et al No. 1 Schroeder, C N½ N½ NW sec. 29-17-9w. Arb. 3,205 ft. (cor.); T.D. 3,215 ft.; pot. 1,321 B.O.

Colonial Oil Co. No. 1 Hogy, NW cor. sec. 16-16-10w. Drlg. 3,150 ft.

Ralph Wixson et al No. 1 Peterman, SW cor. sec. 28-17-10w. Drlg. 2,775 ft.

Greenwood County

John Nichols et al No. 1 Central Life, SE SW sec. 35-25-12. Spd. and S.D.

Harper County

Franklin Drlg. Co. No. 1 Walts, NE SW sec. 24-34-6w. Drlg. 2,632 ft.

Harvey County

National Ref. Co. No. 1 Brown Bros. NW SE NE sec. 22-23-2w. Drlg. 3,100 ft.

Jackson County

Lemmick Oil Co. No. 1 Marble Savings Bank, NE cor. sec. 26-9-14. Spd. and S.D.

Jewell County

Hollingsworth Bros. No. 1 Wolfe, NE SW SE sec. 14-4s-8w. Spd. and S.D.

Lane County

Phillips Pet. Co. No. 1 Kees, C SE SE sec. 3-19-30w. T.D. 4,763 ft.; S.D.; may deepen.

McPherson County

Archer & Crane No. 1 Templin, NW SW SE sec. 32-17-3w. Drlg. 2,800 ft.

Darrah et al No. 1 Decker, SW SW SE sec. 12-21-2w. Drlg.

Meade County

Pacific Mid-West Co. No. 1 Rexford, NE SE SW sec. 8-30-29w. S.D. 200 ft.; (cor.).

Ness County

Marshall Drlg. Co. et al No. 1 Anderson, SW NW sec. 23-16-24w. Spd. and S.D.

Trojan O. & G. Co. No. 1 Moses, C SW NW sec. 10-18-25w. S.D. 500 ft.

Trojan O. & G. Co. No. 1 Page Milling Co. SE SE NW sec. 36-18-26w. C.O. 3,265 ft.

Phillips County

C. W. Davidson et al No. 1 Elliff, SE NE NE sec. 35-5-18w. S.D. 600 ft.

Pratt County

Cities Service Oil Co. No. 1 Delaney, CNL S½ NE sec. 13-26-12w. Set csg. 350 ft.

Reno County

Carey et al No. 1 McPheeters, NE NW sec. 22-26-8w. Rng. csg. 3,434 ft.

Cities Service Oil Co. No. 1 Krele, C NW sec. 27-23-10w. Drlg. 1,200 ft.

McCole et al No. 1 Mathews, SW NW NW sec. 15-24-10w. Set 10-in. 1,955 ft.; C.O.

Clyde Pulse No. 1 Payne, SW NW NE sec. 4-22-7w. Old T.D. 3,440 ft.; dpng.

Skelly Oil Co., Kimmel & Stewart No. 1 Gorham, SW SE sec. 32-25-10w. Arb. 4,837 ft.; T.D. 4,403 ft.; S.D.O.

Rice County

Herndon Drlg. Co. et al No. 1 Froning, NW cor. sec. 15-18-8w. T.D. 3,405 ft.; D.&A.

Price et al No. 1 Gemeinhardt, NE SE sec. 18-18-10w. Arb. 3,297 ft.; pay 3,304-06 ft.; 1,000 ft. O.I.H.

Skiles et al No. 1 Campbell, SE NE sec. 28-19-9w. T.D. 3,208 ft. (cor.); pmpd. 152 B.O. in 20 hrs.; comp.

W. E. Witt et al No. 1 Fair, NW SE SW sec. 4-22-8w. T.D. 3,401 ft.; pot. 326 B.O.; comp.

Rooks County

Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. T.D. 3,339 ft.; 2,000 ft. O.I.H.

Producers Oil Co. No. 1 Ham, SW SW NW sec. 25-7-19w. Set 12-in. 312 ft. (cor.); S.D. 330 ft.

Rush County

Duwe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Sil. 3,492-95 ft.; 1,500 ft sulfur water in hole in 2½ hrs.; T.D. 3,512 ft.; S.D.O.

Russell County

Emrichs et al No. 1 Anderson, NE SE SW sec. 33-15-11w. Spd. and S.D.

Hess et al No. 1 Reinhardt, NE SW sec. 36-12-14w. Drlg. 1,845 ft.

Parks et al No. 1 Gorham Est., SW NW sec. 19-15-15w. Spd.

G. A. Stearns et al No. 1 Stielow, NW cor. sec. 32-11-14w. Drlg. 305 ft.

Winkler & Koch No. 1 Jones, SE SE NW sec. 22-14-13w. Sil. 3,180 ft.; S.D.O.

LEGAL NOTICE

Call for Bids to purchase royalty oil accruing to the United States from the Lance Creek, Wyoming, oil field. Sealed proposals, in duplicate, will be received in the office of the Secretary of the Interior, Washington, D. C., on or before noon, February 28, 1938, from responsible bidders for the purchase, beginning April 1, 1938, of royalty oil accruing to the United States from Government lands in the Lance Creek, Wyoming, oil field. Detailed specifications on quantities offered for sale, required form of bids, deliveries, volume measurements, gravity determinations, bond requirements, and action on bids, should be obtained by prospective bidders from the Director, Geological Survey, Department of the Interior, Washington, D. C.; the oil and gas Supervisor, Geological Survey, Casper, Wyoming; or the Register, U. S. Land Office, Cheyenne, Wyoming. Sealed bids are to be submitted to the Secretary, Department of the Interior, Washington, D. C., pursuant to the specifications, the envelope to be marked plainly "Bid on Lance Creek royalty oil, not to be opened before noon, February 28, 1938." No bid received after the time fixed herein for submitting bids will be considered. (Sgd.) Harold L. Ickes, Secretary of the Interior.

Sedgwick County

Frank Hudson et al No. 1 Fulton, NE SE sec. 35-28-1e. Fsg. 1,550 ft.

McKnab No. 1 Garrett, SE SW SW sec. 18-29-2e. Drlg. 1,450 ft.

I. W. Murfin et al No. 1 Martin, SE NW sec. 32-28-1e. T.D. 3,491 ft.; Pmpd. 24 B.O. in 8 hrs.; comp.

Steinbuchel et al No. 1 McAdams, SW NE sec. 28-20-1e. Drlg. 3,155 ft.

Union O. & R. Co. et al No. 1 Howell, SW cor. sec. 6-29-1e. T.D. 2,400 ft.; S.D.

Stafford County

Atlantic Ref. Co. No. 1 Hitz, SE SE NE sec. 12-22-13w. Drlg. 2,600 ft.

C. L. Carlock et al No. 1 Gates, SE SW NE sec. 34-22-11w. Drlg. 580 ft.

Carter Oil Co. No. 1 Andress, CNL SE sec. 2-21-13w. T.D. 3,554 ft.; set csg.; W.O.C.

Cardinal Oil Co. et al No. 1 Sittner, SW cor. sec. 4-22-12w. T.D. 3,700 ft.; swb. 8 B.O. and 12 B.W. in 4 hrs.

Hipple et al No. 1 Moses, NW SW sec. 9-22-13w. H.F.W. 3,804-07 ft.; P.B. 3,635 ft.; perf. csg.; shot.

National Ref. Co. No. 1 Bonham, SW SE sec. 28-25-12w. Drlg. 3,200 ft.

Fred Rust No. 1 Hullman, SW cor. sec. 5-22-12w. Arb. 3,432-82 ft.; S.D.

J. C. Shaffer et al No. 1 Newell, NE SE sec. 20-24-11w. Arb. 4,065-85 ft.; D.&A.

Torry & Feaster et al No. 1 Heggy, NE SW sec. 26-23-11w. Arb. 3,881-88 ft.; D.&A.

Sumner County

Cities Service Oil Co. No. 1 McCoy, SE SW sec. 11-35-2e. Drlg. 3,690 ft.

Saco Oil Co. No. 1 Phipps, SW SE NE sec. 24-30-1w. Spd. and S.D.

E. B. Shawver No. 1 Stewart, NW SE sec. 4-32-3w. Drlg. 3,800 ft.

Trego County

Carlock No. 1 Kinzel, SW SW sec. 9-13-22w. Spd. and S.D.

NEBRASKA WILDCATS

Arab Pet. Corp. et al No. 1 Ogle, SE SE sec. 9-1n-14e. Viola 3,019 ft.; Granite sec. 9-1n-14e, Richardson County. Viola 3,019 ft.; Gran. 3,423 ft., T.D.; S.D.O.

OKLAHOMA

Week Ending February 12

NORTHERN OKLAHOMA

Beckham County

Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. Drlg. 2,650 ft.

Caddo County

Indian Terr. Illum. Oil Co. No. 1 Dome-Bo, C NE SE sec. 29-6-10w. T.D. 6,900 ft.; to test sd. at 3,500 ft.

Cleveland County

W. A. Delaney et al No. 1 Bugher, SE SE SW sec. 12-7-2w. Rig.

Harper-Turner No. 1 Pollock, C W½ NW NW sec. 13-9-2w. T.D. 7,489 ft.; P.B. 6,620 ft.; drlg. at 6,680 ft.

Comanche County

Clyde Roach No. 1-A Green, SE SE SW sec. 2-1n-13w. S.D. 340 ft.

Creek County

M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. T.D. 3,018 ft.; 2,000 ft. W.I.H. and S.S.O.; S.D.

Garfield County

H. R. Hollenback et al No. 1 Clark, NW cor. sec. 34-21-6w. Second Wilcox 7,298 ft.; T.D. 7,336 ft.; set pipe 7,316 ft.; to drill plug.

Garvin County

S. C. D. Edwards No. 1 Clark, NE cor. sec. 16-3n-3e. T.D. 2,676 ft.; P.B. 2,088 ft.; perf.; swb. 6 bbls. fluid in 1 hr.; est. half wtr.

Grady County

Doyle Pet. Co. No. 1 Huffine, NW NW SE sec. 30-5-8w. Drk.

Gulf Oil Corp. No. 1 Thomas, SW NW NW sec. 14-4-5w. Drlg. 10,400 ft.

Grant County

Magnolia Pet. Co. No. 1 Reynolds, NE NE SE sec. 19-25-5w. T.D. 6,236 ft.; D.&A.

Greer County

R. W. McDonald No. 1 Fite, SE SE sec. 34-7-21w. T.D. 820 ft.; U.R. csg.

J. I. Medlin et al No. 1 Broudie, NW cor. sec. 5-6n-20w. T.D. 90 ft.; (cor.); S.D.

Hughes County

Homer Doup et al No. 1 Bank, NE NE NW sec. 7-7-9. Fsg. 290 ft.

Phillips Pet. Co. No. 1 Becker, NE NW SW sec. 8-5-10. T.D. 6,286 ft.; to P.B.

Kay County

F. S. Freeland et al No. 1-A Watson, NE NW NW sec. 28-28-1w. Rig on ground.

E. J. Shaffer et al No. 1 McKee, NE NW sec. 20-28-1w. T.D. 2,500 ft.; S.D.

Kiowa County

Gauntt & Baker No. 1 Parks, NW NW SW sec. 29-7-20w. Drlg. 623 ft.

Hughes & Reese No. 1 Fultz, SE cor. sec. 10-6-18w. T.D. 1,238 ft.; fsg.

Logan County

Arrow Drlg. Co. No. 1 Dodson, NW cor. sec. 23-17-1w. Drlg. 4,040 ft.

Stanolind O. & G. Co. No. 1 Blunt B, C W½ W½ NW sec. 6-14-3w. T.D. 6,495 ft.; may abd.

Okfuskee County

Broswood Oil Co. No. 1 Lehman, NW SW NW sec. 21-13-10. Dutcher 2,851-54 ft.; 1,800 ft. O.I.H.; bldg. tanks.

Mid-Continent Pet. Corp. No. 1 Ireland, SW NE SW sec. 10-13-10. Wilcox 3,420 ft.; T.D. 3,431 ft.; pmpd. 107 B.O. in 12 hrs.; comp.

Oklahoma County

W. O. Allen et al No. 1 Jackson, C E½ SE NW sec. 6-14-3w. Drlg. 5,840 ft.

Okmulgee County

Phillips Pet. Co. No. 1 Wood, NW SW SW sec. 31-11-13. Drlg. 3,665 ft.

Osage County

Norbla Oil Co. and Carter Oil Co. No. 1 Osage, NW cor. sec. 3-24-6. Drlg. 1,967 ft.

Pontotoc County

Cawley et al No. 1 McCormick, NW SW SW SE sec. 27-2n-4e. Drlg. 80 ft.

H. W. Lee No. 1 Weatherly, NW SE NW sec. 24-1n-7. Drlg. 500 ft.

Jack Lynch et al No. 1-A Parker, SW SW SE sec. 17-4-8. Spd.

H. Riddle et al No. 1 fee, NW SW SE sec. 11-3n-5e. Fsg. 4,490 ft.

Union Dev. Co. No. 1 Abbott, SW NW NE sec. 34-3-6. S.D. 3,320 ft.

Pottawatomie County

Hall & O'Mara No. 1 Shaw, NE NE SE sec. 32-6-5. Set surf. pipe.

Seminole County

H. V. Woodson and Marydun Oil Co. No. 1 Gilliland, SE SW sec. 24-11-7. T.D. 4,293 ft.; rng. 5-in. csg.

Texas County

Hagey et al No. 1 Peck, C NE sec. 6-1n-13ecm. T.D. 2,842 ft.; set 7-in. csg. 2,766 ft.

Harkendorf & Kuhn No. 1 Wiggins, C NW sec. 1-2n-14ecm. Drlg. 200 ft.

Washita County

L. B. McWhirter No. 1 fee, NW SW SW sec. 34-8-19w. Drlg. 2,004 ft.

SOUTHERN OKLAHOMA

Atoka County

Amerada Pet. Corp. and Stanolind O. & G. Co. No. 1 Ridgway, NE cor. sec. 24-3s-9. Drlg. 1,940 ft.

C. M. Sheldon and Gardner Pet. Co. No 1 Lee, NE NW SW sec. 2-4s-10e. U.R. 2,215 ft.

Bryan County

Southern Oil Co. No. 1 Henry, NW NW NE sec. 10-8s-7. Drlg. 3,298 ft.

Choctaw County

V. K. Chapman and T. N. Low No. 1 Hallum, NE NW NW sec. 4-7s-20. T.D. 340 ft.; fsg.

J. A. True No. 1 Boby, C NW SW sec. 17-7s-19e. T.D. 2,175 ft.; S.D.

Cotton County

Bowers & Wise No. 1 Pendergraft, NW SE SW sec. 4-4s-12w. Loc. abd.

Jefferson County

Massad & Swansberger No. 1 Barrett, NE SE SE sec. 14-6s-6w. T.D. 1,890 ft.; S.D.

Johnston County

Patton et al No. 1 McCrummins, C SW SW NE sec. 16-1s-6e. S.D. 1,380 ft.

W. T. Sheldon No. 1 Chapman, C NW NW sec. 26-4s-6e. Drlg. 3,076 ft.

Marshall County

Paul Robb et al No. 1 Vittitoe, C NE SE sec. 11-5s-4e. O.W.D.D.; T.D. 5,461 ft.; P.B. without result.

Murray County

Sinclair Prairie Oil Co. No. 1 Lancaster Trust, C SW NE sec. 10-1-2e. T.D. 4,404 ft.; freeing stuck pipe.

Stephens County

Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. T.D. 10,000 ft.; P.B. and drld. to 9,086 ft.; tstg.

Helmerich & Payne No. 1 Pfile, SW cor. sec. 1-2s-7w. T.D. 4,246 ft.; set 5½-in. csg. 3,973 ft.

Robinson et al No. 1 Alexander, NW NE NW SE sec. 30-2n-4w. S.D. 380 ft.

Robinson et al No. 1 Sadler, SW NW NE SW sec. 30-2n-5w. Loc. abd.

Schmoerke No. 1-A Sadler, SW NW NW SE sec. 30-2n-4w. S.D. 580 ft.

Tillman County

H. I. Grimes et al No. 1 Laney, NW cor. sec. 3-3s-18w. Bldg.

Indian Terr. Illum. Oil Co. No. 1 Drum, C N½ SW NW sec. 32-2s-17w. T.D. 3,843 ft.; wtr.

M. G. Martin No. 1 Parris, NW NW SW sec. 3-3s-19w. T.D. 2,135 ft.; fsg.

Smith No. 2 Hammell, NE NW NW sec. 6-5s-15w. T.D. 1,581 ft.; S.D.

ARKANSAS

Cleveland County

J. T. Markwick and E. O. Olds No. 1 A. Vance, NW cor. NW sec. 18-11-11. R.U.

Columbia County

Kerr-Lynn Oil Co. No. 1 Barnett, sec. 14-17-20. Cd. hd. slightly porous L. 7,659-64 ft.; T.D. 6,664 ft.; stuck 7-in. csg. about 400 ft. off bttm. and cmtd.

Standard Oil Co. of La. No. 1 Bodcaw-Barbara, NE cor. SE NW sec. 18-16-22. Drlg. sh. 3,673 ft.

Standard Oil Co. of La. No. 1 S. T. Crone, NW cor. NW SE sec. 8-16-22. Drlg. sh. 1,847 ft.

Standard Oil Co. of La. No. 1 W. P. Phillips et al, 660 ft. N and W, C sec. 15-17-19. Loc.

Crittendon County

Manning & Martin No. 1 Cartwright, SW cor. sec. 16-7n-8e. S.D. 4,200 ft.

LaFayette County

Lillian Taubel et al No. 1 Tatum, NE cor. SE NW sec. 18-16-22. Drlg. hd. sdy. L. 5,785 ft.

Little River County

Heenan & Coe No. 1 Waldrop, SE NW sec. 21-12-28. S.D. 1,960 ft.

Joe G. Strahan et al No. 2 Dierks Lbr. Cd. Drlg. bl. sh. 2,260 ft.

Miller County—Rodessa

G. C. Grasty No. 1 Mitchell, NW sec. 11-20-28. R.U.

Gulf Oil Corp. No. 1 Hanner, SE cor. sec. 16-20-24. Drlg. L.&sh. 3,728 ft.

R. Lacy No. 2 Grogan, E½ W½ sec. 15-20-28. S.D. 2,028 ft.

W. M. Layton No. 1 McKellar, SE cor. W½ W½ sec. 15-20-28. Drlg. sh. 1,300 ft.

R. H. Long No. 3 Greer, NE SE sec. 10-20-28. Set 9⅝-in. csg. 2,030 ft.; drlg. sh. 5,294 ft.

R. H. Long No. 4 Greer, sec. 10-20-28. Comp.; 157 B.P.D.; ¾-in. ck.; T.D. 6,122 ft.

McClanahan & Feazel No. 2 Eason, C N½ NW SW sec. 12-20-28. R.U. & S.D.

R. W. Newell No. 1 Thomas, NW SE sec. 12-20-28. Set 5½-in. csg. 6,130 ft.; T.D. 6,144 ft.; perf. 6,096-6,106 ft.; flwd. small heads while swbg.; reperf. 5,987-6,110 ft. and acidized; swbg.

Nivia Oil Corp. No. 1 Cross, SE cor. SE NE sec. 11-20-28. T.D. 6,106 ft.; set 7-in. csg. 6,104 ft.; perf. 6,040-95 ft.; acid.; W.O.S.R.

Texas Canadian Oil Corp. No. 3 Thomas, NE cor. NW SE sec. 12-20-28. Drlg. 2,375 ft.

Thompson & Jaffra No. 1-A Treadway, NW cor. SE SE NE sec. 10-20-28. Drlg. sh.&L. 4,780 ft.

Sam Tillingsworth No. 1 Treadway, SW cor. SE SE NE sec. 10-20-28. Drlg. 5,317 ft.

Nevada County

Bruce E. Wallace No. 2 Haynie, SE cor. sec. 5-14-21. S.D. fuel 1,060 ft.

Ouachita County

Copenhaven Oil Corp. No. 1 Evans, NE cor. NE SW sec. 20-11-19. S.D. 1,825 ft.

A. H. Tarver et al No. 1 Guy Smith, sec. 16-14-19. Tokio sd. 2,186-2,210 ft.; S.D.; W.O.

Pulaski County

A. L. Kitselman, No. 2 A. L. Kitselman Jr., SE SE SW sec. 2-1s-13e. S.D. 2,130 ft.; very hd. bl. slate.

Union County—Shuler

Alice Sydney Oil Co. No. 3 Morgan, NW NE SE sec. 18-18-17. T.D. 7,717 ft.; set 7-in. csg. 7,629 ft.; perf. 7,525-65 ft.; wsg.; to test.

Alice Sydney Oil Co. No. 1 Powledge, SE cor. SW SE sec. O.W.W.O.; old T.D. 6,005 ft.; prep. deepen.

Ark. Southern Oil Corp. No. 2-A Simmons, SW cor. NE NW sec. 15-18-13. T.D. 2,307 ft.; O.I.H.; W.O. pmp.

E. M. Jones No. 3 Marine Oil Co., NE NW SE sec. 17-18-17. Drk.

E. M. Jones et al No. 1-A Murphy Ld. Co. Drlg. 7,346 ft.

Lion Oil Ref. Co. No. 2 Marine Oil Co., SW cor. E½ SE¼ sec. 17-18-17. Drlg. red and gr. sh. 3,915 ft.

Lion Oil Ref. Co. No. 1 Mayfield, SE cor. Lot 3, Fract. NW¼ sec. 18-18-17. R.U.

Lion Oil Ref. Co. No. 1 Miller, SW cor. NE NW sec. 18-18-17. Drlg. red and gr. sh. 4,312 ft.

Lion Oil Ref. Co. No. 4-A Edna Morgan, NW cor. Lot 1, SW sec. 18-18-17. Drlg. red and gr. sh. 4,803 ft.

Lion Oil Ref. Co. No. 4-B Edna Morgan, NW SW SE sec. 18-18-17. Set 7-in. csg. 7,638 ft.; T.D. 7,639 ft.; comp.; 2,544 B.P.D.; 45/64-in. ck.

Lion Oil Ref. Co. No. 5-B Morgan, SE cor. W½ SE sec. 18-18-17. Drlg. sdy. sh. 5,885 ft.

Lion Oil Ref. Co. No. 2-C D. S. and J. C. Morgan, SW cor. SE SE sec. 18-18-17. R.U.

Lion Oil Ref. Co. No. 5-A E. Morgan, NE cor. Lot 7, SW sec. 18-18-17. Set 16-in. csg. 122 ft.

Marine Oil Co. No. 3 fee, SW sec. 17-18-17. Jones sd. 7,533-70 ft.; set csg. 7,579 ft.; drlg. plug; T.D. 7,590 ft.; comp.; 980 B.P.D. on 25/64-in. ck.

Marine Oil Co. No. 4 fee, NW cor. SW SW sec. 17-18-17. Drlg. red and gr. sh. 5,053 ft.

Marine Oil Co. No. 3 Justiss, NE cor. Lot 7, NW sec. 18-18-17. Drlg. 3,280 ft.

Marine Oil Co. No. 4 Justiss, cen. Lot 7 NW sec. 18-18-17. Drlg. sdy. sh. 6,601 ft.

Marine Oil Co. No. 1 Miller, SE cor. Lot 1, NW sec. 18-18-17. R.U.

Phillips Pet. Co. No. 1 First Natl. Bk., NE SW sec. 17-18-17. Set 7-in. csg. 7,607 ft.; T.D. 7,635 ft.

Phillips Pet. Co. No. 2 Justiss, NW sec. 18-18-17. Set 7-in. csg. 7,700 ft.; perf. and killed to reperf.; T.D. 7,700 ft.

Phillips Pet. Co. No. 1 Marine Oil Co., NE cor. NW NE sec. 20-18-17. Drlg. red and gr. sh. 3,725 ft.

Phillips Pet. Co. No. 2 Marks, SW sec. 18-18-17. T.D. 7,770 ft.; set 7-in. csg. 7,681 ft.; perf. 7,516-50 ft.; comp.; 83 B.P.H.

Phillips Pet. Co. No. 2 Rosen, SE cor. SW NE sec. 18-18-17. Drlg. red and gr. sh. 5,480 ft.

Texas Canadian Oil Corp. No. 1 Powledge, C NE NW NW sec. 21-18-17. Drlg. 1,265 ft.

Union County—Other

Penn-Ark. Pet. Corp. No. 1 Raulston, sec. 12-17-14. T.D. 3,175 ft.; S.D.; litigation.

W. D. Wingfield, Tr., No. 1 Kidd Est., C NE NW SE sec. 15-18-13. Set 7-in. csg. 2,263 ft.; T.D. 2,322 ft.; sd. 2,310-22 ft.; 300 ft. O.I.H.; W.O. pmp.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

F. W. Burford No. 1 Brown, NE cor. SE sec. 5-23-16. Drlg. sh. 5,323 ft.

Clark Oil Corp. No. 1-C Sharp, sec. 4-23-16. Set 7-in. csg. 5,965 ft.; T.D. 6,045 ft.; comp.; 20 B.P.D.; heading; open tbg.

J. S. Rushing No. 1 Alexander, NW cor. sec. 3-23-16. Drlg. L.&sh. 5,036 ft.

Standard Oil Co. of La. No. 1 Rodessa Oil & Ld. Co., NE cor. NE NE sec. 10-23-16. Drlg. sh. and strks. L. 3,963 ft.

Standard Oil Co. of La. No. 2 Spearman, SE cor. SE SE sec. 3-23-16. R.U.

Union Prod. Co. No. 6 Harris, sec. 10-23-16. Set 7-in. csg. 5,887 ft.; T.D. 5,940 ft.; comp.; 276 B.P.D.; ¼-in. ck.

Union Prod. Co. No. 7 Harris, NW cor. NE sec. 10-23-16. Drlg. sh.&L. 5,062 ft.

N. LOUISIANA WILDCATS

Bienville Parish

Gulf Ref. Co. No. 1 Goodpine, sec. 25-14-8. Drlg. sh. 7,850 ft.

Bossier Parish

L. W. Dennis No. 1 Roos, SW NW NW sec. 13-19-12. Perf. 840-42 ft.; tstd. S.W.; recmtd. 8¼-in. 855 ft.; T.D. 864 ft.

C. H. French No. 2 Larkin, NW cor. SE sec. 14-19-11. Drlg. 220 ft.

Premier Inv. Co. No. 1 McDade, SE SW NE sec. 28-19-11. Drlg. sdy. sh. 1,481 ft.

Triangle Drlg. Co. No. 2-A Herold, NW cor. sec. 13-17-12. Sat. L. 3,116-19 ft.; set 5½-in. csg. 3,110 ft.; T.D. 3,125 ft.

Caddo Parish

Anderson & Gilbert No. 1 Pittman, SE cor. SW sec. 14-19-14. Drlg. 1,329 ft.

Ardsell Oil Co. and H. W. Russell No. 2 Muslow, sec. 26-21-16. O.W.W.O.; T.D. 2,246 ft.; set 5½-in. csg. 2,205 ft.

W. D. Chew No. 4 Spell, SE sec. 29-21-15. S.D. 1,517 ft.; high wtr.

L. T. Davis No. 3 Styles, SE cor. sec. 17-21-16. Drlg. sh. 600 ft.

Double "T" Oil Co. No. 1 Goodwin, NW cor. sec. 33-21-15. Set 6-in. csg. 1,410 ft.; W.O.S.R.; T.D. 1,630 ft.

J. P. Driscoll et al No. 2 Muslow, SE cor. NE NW sec. 4-20-15. S.D. 1,700 ft.; high wtr.

W. Drumgoole No. 6 Sch. Bd., sec. 16-19-14. Comp. pump. 45 B.P.D.; T.D. 2,445 ft.

W. D. Flynn No. 3 Natalie, SW cor. sec. 10-21-16. T.D. 1,029 ft.; W.O.S.R.

W. H. Harrison, Jr., No. 3 Crystal Shoreline, SW cor. SW NW sec. 25-21-16. Cg. 1,995 ft.

Louisiana Oil Prod. Co. No. 14-B Muslow, sec. 4-20-15. S.D. 2,130 ft.; high wtr.

Magnolia Pet. Co. No. 23 Dillon Hrs., NW cor. NE NE sec. 23-21-15. Drk.

J. F. Mitchell No. 1 Muslow, NE cor. sec. 31-21-15. Cg. rk. 1,430 ft.

Olson Drlg. Co. No. 1 Sharp, C NW NE sec. 10-18-16. Drlg. sh.&L. 2,370 ft.

Petroleum Heat & Power Co. No. 1 Wemple, NW cor. sec. 14-20-15. Drlg. sh. 1,404 ft.
S. M. Richardson No. 2 Sentell, sec. 9-19-14. R.U.
A. D. Robinson No. 1 Wilkinson, sec. 22-20-14. T.D. 2,805 ft.; P.B. 2,450 ft.; W.O.C.
3-Sands Oil Co. No. 1 Player, 330 ft. S and E, C sec. 26-21-15. Set 4½-in. csg. 2,224 ft.; T.D. 2,233 ft.
J. E. Sedberry No. 1 Dickinson, NW sec. 15-19-14. Set 6-in. csg. 2,443 ft.; W.O. S.R. 2,505 ft.
Raymond Wright No. 1 Hobbs, NE cor. sec. 29-21-15. Tstg. 1,635 ft.
Simplex Oil Co. No. 6 Natalie, sec. 10-20-15. Set 10-in. csg. 80 ft.; S.D. 700 ft.

Caldwell Parish

G. W. Ziegen No. 12 La. Cen. Lbr. Co., sec. 20-14-3e. T.D. 1,767 ft.; D.&A.

Claiborne Parish

Atlantic Ref. Co. No. 2-D Patton, C S½ SE SE sec. 29-21-4. T.D. 5,246 ft.; set 5½-in. csg. 5,228 ft.
T. L. James No. 2 Fowler, NE SW sec. 32-21-4. T.D. 5,190 ft.; set 5½-in. csg.; W.O.C.
J. R. McMurray No. 1 Bean, C N½ SE NW sec. 32-21-4. T.D. 5,167 ft.; set 5½-in. csg.
A. O. Olson et al No. 2 English, NE SE sec. 29-21-4. Set 7-in. csg. 5,153 ft.; tstg.; T.D. 5,168 ft.
A. O. Olson et al No. 7-A Patton, sec. 30-21-4. Drlg. 4,338 ft.
Sloan & Zook No. 2 Patton, SE NW sec. 1-20-5. Drlg. 1,455 ft.
Texas Canadian Oil Co. No. 1 Tanner, C N½ SE NE sec. 32-21-4. Set 10¾-in. csg. 837 ft.
Tippett Oil Corp. No. 1 Aycock, SE sec. 1-20-5. Drlg. 4,250 ft.
Union Prod. Co. No. 2 Brownfield, sec. 5-19-5. T.D. 9,964 ft.; sh.; set plug 8,-850 ft.; to straighten hole.
Union Prod. Co. No. 1-A Kilpatrick, sec. 11-19-6. Cg. 5,763 ft.
G. H. Vaughn No. 3 Eppinger, C S½ NW SW sec. 29-21-4. Sat. L. 5,110-19 ft.; 5½-in. csg. 5,110 ft.; T.D. 5,125 ft. comp. 40 B.P.H.; ¼-in. ck.
G. H. Vaughn No. 3 King, C S½ sec. 30-21-4. Set 10¾-in. csg. 861 ft.

De Soto Parish

A. P. Barrett No. 1 Jal Drlg. Co., NW cor. SE SW sec. 7-11-11. Set 6⅝-in. csg. 2,777 ft.; T.D. 2,809 ft.; swbg. to test; S.D.
Pet. Heat & Power Co. No. 1 DeSoto Corp., SE cor. SW NW sec. 7-11-11. Cg. 2,780 ft.
Pet. Heat & Power Co. No. 1 Jal Drlg. Co., SW cor. SE NW sec. 7-11-11. Set 7-in. csg. 2,744 ft.; T.D. 2,792 ft.
Pet. Heat & Power Co. No. 1 Matthews, sec. 29-12-11. Cg. 2,446 ft.
Pet. Heat & Power Co. No. 2 Matthews, sec. 30-12-11. Drlg. sh. 1,210 ft.
Pet. Heat & Power Co. No. 1 Taylor, NE cor. NE SE sec. 12-11-12. Sd. 2,805-11 ft.; drlg. L. 3,285 ft.
Pet. Heat & Power Co. No. 2 Taylor, sec. 12-11-12. Drk.
Pet. Heat & Power No. 1 Williams Est., NE cor. SW SE sec. 12-11-12. Drlg. sh. 1,100 ft.
Pet. Heat & Power No. 1 Williams, W. R., NW NE sec. 13-11-12. R.U.

Franklin Parish

Southern Star Pet. Co. No. 2 Grayson, NE cor. NE SE sec. 36-12-6e. Drlg. sh. 1,598 ft.

La Salle Parish

Pet. Heat & Power Co. No. 1 Gaharan, Lot 7, Blk. 1, Holmes & Adams Addn., sec. 25-10-1e. Set 6-in. csg. 1,530 ft.; T.D. 1,541 ft.
Placid Oil Co. No. 5 La. Cent., sec. 12-9-2e. Set 10-in. csg. 100 ft.; D.&A.
Stovall, Tr., No. 4 Russell, SE SE sec. 25-10-1e. 6-in. csg. at T.D. 1,518 ft.; W.O.S.R.

Lincoln Parish

F. H. Brown No. 2 Patton, C S½ SE SW sec. 6-20-4. R.U.
Delta Drlg. Co. No. 1 Weiss & Tatum, C S½ NW NE sec. 7-20-4. D.S. stuck 5,306 ft.
Love Bros. No. 2 Patton Est., sec. 6-20-4. Set 5⅛-in. csg. 5,294 ft.; T.D. 5,316 ft.
Lyon & Neely No. 1-B Patton, SE SE sec. 6-20-4. Sat. L. 5,278-83 ft. and 5,-290-95 ft.; 5½-in. csg. 5,276 ft.; comp.; 74 B.P.H. on ¾-in. ck.; T.D. 5,303 ft.
Magnolia Pet. Co. No. 1 Patton Est., NE cor. NW sec. 7-20-4. Set 10¾-in. csg. 888 ft.
Magnolia Pet. Co. No. 1 Pollack, C N½ NE SE sec. 6-20-4. Set 7-in. csg. 5,308 ft.; T.D. 5,310 ft.
E. T. Oakes & Easton No. 1 Griggs, sec. 36-18-1w. Set 5½-in. csg. 6,259 ft.; Schlumberger survey showed sat. 6,-231-40 ft.; set 5½-in. at 6,121 ft.; perf. 5,931-40 ft.; 48 shots; swbd. dry; trtd. with 2,000 gal. acd.; reacd. 5,000 gal.; S.G.; shot with nitro; S.D.; W.O.

Morehouse Parish

W. J. Furlong No. 1 Clark, sec. 10-20-7e. Set 9⅝-in. csg. 2,805 ft.; wsg. to bttm.; T.D. 6,025 ft.

Natchitoches Parish

Jos. E. Popkins No. 1 Peavy Lbr. Co., NW sec. 36-7n-9w. R.U.

Red River Parish

Glassell & Whitehurst No. 1 LeLong, NE NW NE sec. 25-12-11. W.O.; D.S. 1,-810 ft.
Yandell Rogers No. 5 Gaspair, SE SW sec. 27-13-11. Set 5⅛-in. csg. 2,453 ft.; T.D. 2,462 ft.

Sabine Parish

Hunter Co. No. 2 Bowman, C SW NE sec. 12-17-13. Set 6-in. csg. 2,139 ft.; T.D. 2,152 ft.
Major Oil Co. No. 1 Graham, NW cor. sec. 20-9-13. Comp.; 35 B.P.D.; T.D. 1,662 ft.
H. N. Morris No. 1 Irving & Bishop, C NW NW sec. 18-7-12. Set 12-in. at 80 ft.
Sutton-Zwolle Oil Co. No. 1 Sabine Lbr. Co., SE cor. NW NE sec. 23-7n-14w. Set 9⅝-in. csg. 2,215 ft.

Tensas Parish

H. M. Jones No. 2 Chicago Mill & Ld. Co., NE NW sec. 31-12-10e. T.D. 826 ft.; D.&A.

Union Parish

Joe Modisett No. 1 Frost Lbr., sec. 14-21-1e. T.D. 7,005 ft.; M.I. heavy rig; bldg. drk. to D.D.

Webster Parish

S. W. L. Backus No. 4 Pardee Co., NE sec. 3-22-11, R.U.
H. L. Hunt Oil Co. No. 1 Hope, C SW NW sec. 24-21-10. Set 7-in. csg. 5,838 ft.; T.D. 5,852 ft.
C. E. Lunsford No. 1 Turner, SW cor. SE sec. 20-20-8. S.D. 2,309 ft.
Magnolia Pet. Co. No. 2 Mixon, sec. 22-21-10. Drlg. sd. 7,940 ft.
Magnolia Pet. Co. No. 1 Sexton Unit, NW SE sec. 32-23-9. Set 9⅝-in. protective csg. 6,814 ft.; W.O.C.
North American Oil Co. and Root Pet. Co. No. 1 Coyle, NE SW sec. 28-21-10. Drlg. sh. 8,125 ft.
North American Oil Consol. Co. No. 1 Stewart, C SE NE sec. 32-27-10. Set 9⅝-in. csg. 5,866 ft.; T.D. 5,906 ft.
Ohio Oil Co. No. 2 Bodcaw Acct. 4, SW SE NW sec. 24-21-10. Drlg. L. 5,194 ft.
Ohio Oil Co. No. 48 Bodcaw Acct. 2, SE sec. 15-21-10. Drlg. sh. 8,383 ft.
Ohio Oil Co. No. 49 Bodcaw (Acct. 3), C NW NW sec. 34-21-10. Set 13⅜-in. csg. 808 ft.; drlg. sh. 1,995 ft.
Ohio Oil Co. No. 1 Crutsinger, NE cor. sec. 35-21-10. Set 13⅜-in. csg. 808 ft.
Ohio Oil Co. No. 23 Gray Acct. No. 1, SE sec. 27-21-10. Drlg. rd. sh. 7,515 ft.
A. G. Oliphant No. 2 Banks, C SE NW sec. 34-21-10. Holloway sd. 5,740-57 ft.; set 9⅝-in. csg. 5,728 ft.; T.D. 5,804 ft.
A. G. Oliphant No. 1 Central Inv. Co., C NW SE sec. 33-21-10. Drlg. L.&sh. 3,997 ft.
A. G. Oliphant No. 1 Stewart, sec. 33-21-10. Drlg. L.&sh. 3,615 ft.
Stanolind O. & G. Co. No. 1 Pardee Co., SW NE sec. 36-21-10. Drlg. L.&sh. 5,-765 ft.
Union Prod. Co. No. 4 Stewart, SE cor. SE sec. 28-21-10. Drlg. sh.&L. 5,612 ft.

Winn Parish

G. W. Ziegen No. 13 La. Cen. Lbr. Co., sec. 4-13-1e. 12-in. at 62 ft.; W.O.C.

SOUTH LOUISIANA FIELDS

Anse La Butte—St. Martin Parish

Crusader Oil Co. No. 2 Central Oil Co., sec. 86-9s-5e. Core sdy. sh. 1,465 ft.
Austin B. Taglar No. 4 Begnaud, sec. 113-9s-5e. T.D. 1,970 ft.; 7-in. csg. 1,-916 ft.; perf. csg. 912-20 ft.; swbd. S.W.
Austin B. Taylor No. 5 Begnaud, sec. 117-9s-5e. 7-in. csg. 826 ft.; drlg. sh. 1,122 ft.

Bay St. Elaine—Terrebonne Parish

F. J. LeBlanc No. 2 Wurzlow, sec. 17-22s-18e. S.D. 816 ft.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 1 Schwing, sec 67-9s-11e. Top sd. show oil 6,827 ft.; T.D. 6,837 ft.; 7-in. csg. 6,828 ft.; tstg. swbd. S.W.; pulled screen and lnr.

Bayou Cocotris—Terrebonne Parish

Shell Pet. Corp. No. 4-B Realty Operators, sec. 17-17s-15e. 10¾-in. csg. 2,-456 ft.

Bayou De Allemands—St. Charles Parish

Amerada Pet. Corp. No. 1 St. Charles Ld. Co., sec. 38-15s-20e. 10¾-in. csg. 2,698 ft.; top salt 9,255 ft.; T.D. 9,263 ft.; 7-in. csg. 7,200 ft.; Schlumberger shwd. 7¾ ohms, 130 millivolts; P.B. 6,940 ft.; perf. csg. 6,928-31 ft.; D.S.T. showed S.W.; slight gas show; squeezed off perf.; set retainer at 6,886 ft.; drld. out to 6,940 ft.; perf. csg. 6,909-20 ft.; tstd. S.W.; set retainer 6,898 ft.; sqzd. off perf.; perf. csg. 6,810-15 ft.; shwd. S.D. on D.S.T.; sqzd. off perf.; W.O.C.

Big Lake—Cameron Parish

Union Sulphur Co. No. 2 Miami Corp., sec. 19-12s-8w. Drlg. sdy. sh. 7,517 ft.

Black Bayou—Calcasieu Parish

Shell Pet. Corp. No. 40 Watkins. Drlg. sh. 4,437 ft.

Bosco—Acadia Parish

Superior Oil Co.-Pure Oil Co. No. 5 Larcade, sec. 35-8s-3e. T.D. 10,216 ft.; P.B. sdtrkd.; T.D. 9,927 ft.; 9⅝-in. csg. 7,536 ft.; T.D. 10,326 ft.; P.B. 9,423 ft.; drlg. sh. 10,392 ft.

Edgerly—Calcasieu Parish

La. Crusader Oil Co. No. 1 La. Prairie, sec. 21-9s-11w. T.D. 5,108 ft.; P.B. and sdtr.; drlg. sh. 3,082 ft.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 21 Sch. Ld., sec. 16-14s-13w. T.D. 4,271 ft.; 7-in. csg. 4,247 ft.; I.P. 540 B.P.D.; ¼-in. ck.
Burton-Sutton Oil Co. No. 22 Sch. Ld., sec. 16-14s-13w. R.U.

Cheneyville—Rapides Parish

Amerada Pet. Corp. No. 4 Weil, sec. 53-1s-2e. Cg. sh. 6,267 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 1 Eucer, sec. 11-13s-9e. T.D. 10,317 ft.; D.S. stuck.; fsg.; P.B. 2,640 ft.; 7-in. csg. 2,618 ft.
Pan American Prod. Co. No. 1 Robichauv, sec. 11-13s-9e. T.D. 1,906 ft.; 7-in. csg. 1,848 ft.; drld. out to 1,967 ft.; P.B. 890 ft.; sdtrkd.; drlg. 1,932 ft.

Choctaw—Iberville Parish

Louisiana Crusader Oil Co. No. 1 E. B Schwing, sec. 29-8s-11e. T.D. 8,969 ft.; well tried to blow out; stuck D.S.
Standard Oil Co. No. 8 Gay, sec. 32-9s-11e. T.D. 6,019 ft.; rmg. to bttm.

Darrow—Ascension Parish

Kiva Oil Co. No. 1 Duplessis, sec. 69-10s-2w. T.D. 60 ft.; S.D.
Humble O. & R. Co. No. 2 Landry, sec. 34-10s-2e. Drlg. sdy. sh. 6,752 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 21 State, sec. 5-22s-16e. Drlg. hd. sd. 6,820 ft.

Fausse Point—Iberia Parish

Texas Co. No. 4 State, sec. 35-11s-8e, 18⅝-in. csg. 90 ft.; drlg. sh. 5,816 ft. in sdtrkd. hole.

Four Isle—Terrebonne Parish

Texas Co. No. 9 L.L.&E., sec. 24-21s-16e. T.D. 8,553 ft.; P.B. 3,881 ft.; sdtrk.; T.D. 6,943 ft.; 9⅝-in. csg. 6,870 ft.; drlg. sdy. sh.

Garden Island—Plaquemines Parish

Texas Co. No. 18 State, sec. 37-23s-33e. Drlg. sh. 4,863 ft.
Texas Co. No. 26 state, sec. 37-23s-33e. Drlg. sh. 3,061 ft.

Gillis—Calcasieu Parish

Union Sulphur Co. No. 2 Mary McIvor, sec. 14-9s-8w. T.D. 7,165 ft.; 5-in. csg. 7,165 ft.; P.B. 7,137 ft.; S.D.
Union Sulphur Co. No. 6 Kaufman, sec. 13-9s-8w. Drlg. sdy. sh. 8,777 ft.

Hackberry—Cameron Parish

W. T. Burton No. 3 Lewis, sec. 22-12s-10w. R.U.
Daryl Davis No. 1 Doiron, sec. 37-12s-10w. S.D. 40 ft.
F. J. LeBlanc No. 1 Doiron, sec. 36-12s-10w. Top salt 3,820 ft.; S.D. 4,003 ft.
Stanolind O. & G. Co. No. 8 Carter & Sweeney, sec. 22-12s-10w. R.U.
Stanolind O. & G. Co. No. 10 Carter & Sweeney, sec. 22-12s-10w. R.U.; (cor.).
Stanolind O. & G. Co. No. 8 Duhon, sec. 22-12s-10w. Drlg. sh. 1,718 ft.
Superior Oil Co. No. 1 Benson-Vincent, sec. 30-12s-10w. R.U.
Texas Co. No. 24-B State, sec. 12s-9w. Drk.
Union Sulphur Co. No. 1 Doiron, sec. 37-12s-10w. T.D. 4,888 ft.; 7-in. csg. 4,876 ft.; heaving sh. 5,940 ft.; S.D.
York Oil Field Supply No. 3 Vincent, sec. 28-12s-10w. T.D. 2,947 ft.; P.B. 2,895 ft.; P.B. 2,848 ft.; to sdtrk.

Horseshoe Bayou—St. Mary Parish

Texas Co. No. 1 St. Mary Parish Ld. Co., sec. 37-17s-9e. 13⅜-in. csg. 1,837 ft.; drlg. sh. 6,229 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Teche Sugar Co., sec. 58-13s-8e. 7-in. csg. 9,884 ft.; drlg. sh. 11,238 ft.

Jennings—Acadia Parish

H. Fostiades et al No. 1 Washington-Opelousas, sec. 41-9s-2w. T.D. 6,890 ft.; well blew out; D.S. stuck.
Fred I. Getty No. 1 Jennings fee, sec. 46-9s-2w. T.D. 1,871 ft.; 6⅝-in. csg. 1,591 ft.; T.D. 2,057 ft.; stuck screen.
Gulf Ref. Co. No. 39 Arnaudit, sec. 47-9s-2w. T.D. 4,840 ft.; P.B. 2,585 ft.; T.D. 4,586 ft.; run 9⅝-in. csg.
Jolly Pet. Co. No. 2 McFarlain, sec. 41-9s-2w. Drk.; (corrected).
Reiter Foster Oil Co. No. 2 Crusel, sec. 42-9s-2w. T.D. 3,908 ft.; P.B. 3,146 ft.; tstg.; abd.
Shell Pet. Corp. No. 3 Community, sec. 40-9s-2w. T.D. 7,492 ft.; D.S. stuck; fsg.
Stanolind O. & G. Co. No. 19 Houssiere-Latrelle, sec. 47-9s-2w. T.D. 6,448 ft.; P.B. 6,135 ft. to straighten hole; re-drlg. sh.&L. 6,743 ft.
Superior Oil Co. No. 1 Julis Clement, sec 46-9s-2w. T.D. 7,324 ft.; D.S. stuck; P. B. to sdtrk.; oil sd. 7,028-88 ft.; drlg. sh. 6,055 ft.
Superior Oil Co. No. 3 Iowa-Jennings, sec. 41-9s-2w. Drlg. sh. 6,421 ft.
Superior Oil Co. No. 6 Jennings-Heywood, sec. 41-9s-2w. Drlg. sd. and gravel 4,465 ft.
Superior Oil Co. No. 9 Leckelt, sec. 42-9s-2w. T.D. 7,480 ft.; P.B. 5,302 ft.; drlg. sh. 5,431 ft.
Superior Oil Co. No. 11 Leckelt, sec. 42-9s-2w. Drlg. sd.&cly. 475 ft.
Victor Weisse No. 1 Clement, sec. 46-9s-2w. Top salt 3,819 ft.; S.D. 3,938 ft. D.S. stuck; drlg. sh. 1,630 ft.; sdtrkd. hole.

Lafitte—Jefferson Parish

Texas Co. No. 9 Lafitte, sec. 20-17s-24e Top oil sd. 10,020 ft.; T.D. 10,055 ft.; 7-in. csg. 10,035 ft.
Texas Co. No. 1 Marrero Land & Investment Co., sec. 20-17s-24e. 13⅜-in. csg. 1,937 ft.; drlg. sdy. sh. 10,235 ft.
Texas Co. No. 2 Marrero Ld. & Inv. Co., sec. 21-17s-24e. Drlg. sd. 8,221 ft.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 7 Lafourche, sec. 12-18s-25e. 7-in. csg. 8,074 ft.; T.D. 9,786 ft.; sdtrkd. hole; rmg.; drlg. sh. 9,-745 ft.

Lake Long—Lafourche Parish

Fohs Oil Co. No. 2 State, sec. 65-17s-19e. R.U.
Fohs Oil Co. No. 3 State, sec. 65-17s-19e. 10¾-in. csg. 2,743 ft.; T.D. 9,539 ft.; sd. 9,517-33 ft.; P.B. 9,464 ft.; perf. csg. 9,482 ft.; T.D. 11,347 ft.; hole caving.

Lake Pelto—Terrebonne Parish

Texas Co. No. 20 State, sec. 8-23s-18e. Drlg. sd. 6,211 ft.

Leesville—Plaquemines Parish

Texas Co. No. 63 Leesville, sec. 27-12s-22e. T.D. 5,695 ft.; 9⅝-in. csg. 5,575 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 Frank Wurzlow, sec. 6-19s-19e. 13⅜-in. csg. 2,796 ft.; cored sd. and sh. show. oil 8,215-25 ft.; drlg. sd. 10,782 ft.

New Iberia—Iberia Parish

Wm. Helis No. 5 Bolivar, sec. 56-12s-7e. Drlg. anhy. 3,837 ft.
Wm. Hellis No. 4 Gulf Land, sec. 52-12s-7e. T.D. 4,798 ft.; 7-in. csg. 4,798 ft.; I.P. 139 bbls. in 24 hrs.; swbg.
Wm. Hellis No. 10 Bernard, sec. 54-12s-7e. R.U.
Texas Co. No. 10-B Hanzen, sec. 54-12s-7e. Drlg. sdy. sh. 3,834 ft.

North Crowley—Acadia Parish

Humble O. & R. Co. No. 1 Daly, sec. 44-8s-1e. Drlg. sd. 9,083 ft.
Humble O. & R. Co. No. 2 Federal Ld. Bk., sec. 34-8s-1e. Drlg. sh. 7,320 ft.
Humble O. & R. Co. No. 2 Habetz, sec. 45-8s-1e. Drk.

Quarantine Bay—Plaquemines Parish

Gulf Ref. Co. No. 4 State, sec. 17-19s-17e. Drlg. sh. 1,600 ft.

Roanoke—Jeff Davis Parish

Humble O. & R. Co. No. 10-B Devilbiss, sec. 11-9s-4w. Drlg. sh. 6,070 ft.

Sorrento—Ascension Parish

Sorrento Oil Co. No. 1 L. L. Barnard et al, sec. 16-10s-4e. 10¾-in. csg. 1,070 ft drlg. plug.

South Elton—Jeff Davis Parish

Stanolind O. & G. Co.-Amerada Pet. Corp. No. 3-B Calcasieu Natl. Bank, sec. 27-7s-3w. T.D. 9,154 ft.; conditioning hole; 9⅝-in. csg. 8,647 ft.; drlg. sh. 9,400 ft.

Starks—Calcasieu Parish

Capital Oil Co. No. 1 Lutcher-Moore, sec. 24-9s-13w. R.U.
J. R. Turnbull et al No. 3 Industrial Lbr. Co., sec. 19-9s-12w. 7-in. csg. 2,-378 ft.; D.D.; T.D. 2,520 ft.; P.B. 2,-420 ft.; I.P. 48 B.P.D.; pmpg.

Sulphur—Calcasieu Parish

Wm. Helis No. 1 Valentine Sugars, sec. 2-17s-20e. R.U.
Union Sulphur Co. No. 852 fee, sec. 29-9s-10w. T.D. 5,068 ft.; P.B. and sdtrkd.; T.D. 5,193 ft.; salt; P.B. 1,703 ft.
Union Sulphur Co. No. 858 fee, sec. 29-9s-10w. Drlg. sh.&L. 4,227 ft.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 1-B Community, sec. 58-17s-20e. Drlg. sh. 3,-445 ft.
Pan American Prod. Co. No. 1 Harang, sec. 9-17s-20e. Drk.
Pan American Prod. Co. No. 16 Harang, sec. 7-17s-20e. Drlg. sdy. sh. 6,916 ft.

Venice—Plaquemines Parish

Tide Water Oil Co. No. 5 Manhattan Fruit Co., sec. 26-26s-30e. Top oil sd. 7,250 ft.; T.D. 7,300 ft.; P.B. 5,000 ft.; W. O.C.
Tide Water Asso. Oil Co. No. 6 Manhattan Ld. & Fruit Co., sec. 26-21s-30e. R.U.

Vinton—Calcasieu Parish

M. McLean No. 17 Gray, sec. 35-10s-12w. R.U.
J. V. Redick No. 1 Vincent, sec. 34-10s-12w. T.D. 2,312 ft., oil sd.; 7-in. csg. 2,285 ft.; bailing; drld. out 2,498 ft.; flwd. oil, then went dead; W.O.
Sutton-Burton No. 1 Calcasieu Natl. Bk sec. 3-11s-12w. T.D. 4,500 ft.; S.D.

Villa Platte—Evangeline Parish

Continental Oil Co. No. 1 N. H. Hirsch, sec. 44-3s-2e. Drlg. sh. 5,002 ft.
Continental Oil Co. No. 1 La. Ld. Improvement Co., sec. 46-3s-2e. 18⅝-in. csg. 247 ft.; top Cook Mtn. 7,997 ft.; top oil sd. 9,017 ft.; T.D. 9,085 ft.; 7-in. csg. 9,040 ft.; flwd. 287 bbls. in 13 hrs.; ⅞-in. ck.

Welsh—Jeff Davis Parish

Howard Clayton No. 1 Walshe, sec. 21-9s-5w. Oil show 1,030-31 ft.; T.D. 1,215 ft.; S.D.
Stanolind O. & G. Co. No. 1 W. B. Conover, sec. 20-9s-5w. 13⅜-in. csg. 2,-017 ft.; drlg. sh. 3,100 ft.

White Castle—Iberville Parish

Shell Pet. Corp. No. 6 Shingle. Drlg. sdy. sh. 5,055 ft.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w T.D. 5,106 ft.; P.B. to approx. 500 ft T.D. 3,925 ft.; D.S. stuck.
Humble O. & R. Co. No. 1 Finch, sec. 22-10s-1e. Drlg. sh. 8,021 ft.

Calcasieu Parish

Republic Prod. Co. No. 1 Sabine Tram. Co., sec. 25-18s-14w. 10¾-in. csg. 1,981 ft. T.D. 9,620 ft.; hole clean; S.D.; high wtr.

Shell Pet. Corp. No. 1 Calcasieu Natl. Bk. sec. 18-11s-10w. Drlg. sd.&sh. 7,790 ft.

Wheeler Oil Corp. No. 2 Sch. Ld., sec. 1-9s-7w. 15½-in. csg. 46 ft.; drlg. sh. 521 ft.

Cameron Parish

Humble O. & R. Co. No. 1-B Miami Corp., sec. 7-14s-6w. Drlg. sd. 2,115 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w 10¾-in. csg. 1,157 ft.; 7⅝-in. csg. 7,166 ft.; T.D. 9,394 ft., sd.; well attempted to blow out; killed; conditioning hole.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-9s-2e. T.D. 7,678 ft.; S.D.

Iberia Parish

Texas Co. No. 2-B Vermilion Bay, sec. 20-16s-5e. T.D. 9,101 ft.; P.B. and sdtrkd at 5,788 ft.; T.D. 7,020 ft.; P.B. 6,385 ft.; to sdtrk.; T.D. 6,600 ft.; P.B. 5,800 ft.; W.O.C.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 12-12s-11e. T.D. 3,752 ft.; D.S. stuck; abd.

Jefferson Davis Parish

Union Sulphur Co. No. 1 Calcasieu National Bank, sec. 12-9s-6w. T.D. 8,524 ft.; 7-in. csg. cmtd. 8,524 ft.; P.B. 8,296 ft.; set retainer 8,272 ft.; sqzd. off perf.; perf. csg. 8,286-88 ft.; flwd. 50 bbls. dist. per day; 12/64-in. ck.

Lafayette Parish

Continental Oil Co. No. 1 Foreman, sec. 36-9s-3e. Drlg. sh. 1,320 ft.

Pointe Coupe Parish

Batchelor Oil Co. No. 1 Hackney, sec. 28-3s-8e. Drk.

St. James Parish

Continental Oil Co. No. 1 Realty Operators, sec. 17-12s-17e. R.U.

St. Martin Parish

Carter & Stewart No. 2 Martin, sec. 32-9s-7e. Drlg. sh. 2,180 ft.

Shell Pet. Corp. No. 1 Unit, sec. 11-14s-12e. Cg. sdstn. 8,262 ft.

Texas Co. No. 4 State Lake Mongoulois, sec. 14-10s-9e. Drlg. sd.&sh. 7,418 ft.

St. Mary Parish

Pet. Heat & Power Co. No. 9, sec. 9-13s-9e. Drlg. sh. 1,500 ft.

Terrebonne Parish

Fohs Oil Co. No. 1 Buckley & Bourg, sec. 77-19s-17e. Drlg. sh. 310 ft.

Fohs Oil Co. No. 1 State, sec. 41-19s-19e. R.U.

Halliburton Oil Prod. Co. No. 1 Hanchey, H. B. Johnson Sur. R.U.

Humble O. & R. Co. No. 1 W. McMurtry, H. B. Johnson Sur. R.U.

Humble O. & R. Co. No. 1 Partlow, H. B. Johnson Sur. T.D. 7,645 ft.; 5-in. csg. 7,628 ft.; comp.; no ga.

McAlester Fuel Oil Co. No. 2 V. B. Hinson, H. B. Johnson Sur. Drlg. sh. 6,837 ft.

Sun Oil Co. No. 1 A. A. Hisey, H. B. Johnston Sur. R.U.

L. W. Wickes No. 2 Tullos, H. B. Johnston Sur. R.U.

Bay City—Matagorda County

Hamman Expln. Co. No. 2 Thompson, E. Hall Sur. Drlg. 3,312 ft.; no report.

Pan American Prod. Co. No. 1 Richers, I.&G.N. Sur. X-3. Drlg. sh. 8,265 ft.

Buckeye—Matagorda County

United North & South Development Co. No. 1 G.B.M., Cotton Lge. 7-in. csg. 8,667 ft.; T.D. 10,500 ft.; hole cleaned; W.O.O.; P.B. to 7,300 ft.; to sdtrk.; T.D. 7,910 ft.; rng. line to test.

Palacios—Matagorda County

Atlantic Ref. Co. & McCarthy No. 3 Foley Ld. Co., L. Goodwin Sur. T.D. 8,635 ft.; run 7-in. csg.

Orange—Orange County

J. M. Campbell No. 1 Scales, Wm. Dyson Sur. Spd.

Gulf Oil Corp. No. 1 Cora Granger, Wm. Dyson Sur. 10¾-in. csg. 1,637 ft.

Gulf Oil Corp. No. 1 Granger Wm. Dyson Sur. Drlg. sh. 4,347 ft.

Ryan and Thompson No. 1 Norwood, Wm. Dyson Sur. Drlg. sh. 5,627 ft.

Union Prod. Co. No. 2 Lutcher-Moore, Dryson Sur. Drlg. sh. 4,510 ft.

Segno—Polk County

Gulf Oil Corp. No. 2 Ragan, I.&G.N. Sur. 15. Drlg. sh. 6,473 ft.

Gulf Oil Corp. No. 10 G. F. Wing, I.&G. N. Sur., sec. 15. Drk.

Spurger—Tyler County

Republic Prod. Co. No. 7 Hurd, N. Hurd Sur. T.D. 7,710 ft.; I.P. 631 B.P.D. through ¼-in. ck.

Republic Prod. Co.-Houston Oil Co. No. 8 Hurd, N. Hurd Sur. Loc.

TEXAS

Week Ending February 12

GULF COAST FIELDS

Lockridge—Brazoria County

Gulf Oil Corp. No. 3 Gibson, J. W. Hall Sur. Drlg. sh. 4,638 ft.

Gulf Oil Corp. No. 3-A G. L. Wood, T. Alsbury Sur. Drlg. sh.&L. 4,686 ft.

Shell Pet. Corp. No. 4-B Ramsey, J. W. Hall Sur. T.D. 6,369 ft.; 7-in. csg. 6,565 ft.; flwd. gas; killed to recomp.

Hastings Field—Brazoria County

C. Andrade No. 1 Blumer, H.T.&B. Sur. No. 28. Drlg. sh. 3,530 ft.

Humble O. & R. Co. No. 1-C Brown, W. H. Snyder Sur. T.D. 6,095 ft.; tstg.

Humble O. & R. Co. No. 10 R. D. Haden. R. Hoppel Sur. Drk.

Humble O. & R. Co. No. 1 Hortsman, H.T.&B. Sur. No. 37. Drk.

Humble O. & R. Co. No. 7 M. G. McDeed, H.T.&B. Sur. No. 30. Drlg. sh. 1,816 ft.

Jay Simmons No. 3 C. H. Alexander, H. T.&B. Sur. No. 28. T.D. 6,085 ft.; tstg.

Stanolind O. & G. Co. No. 7 R. L. Autrey, H.T.&B. Sur. No. 37. R.U.

Stanolind O. & G. Co. No. 8 T. C. Edwards, Wm. Henry Sur. R.U.

Stanolind O. & G. Co. No. 1 C. W. Massey, H.T.&B. Sur. No. 37. T.D. 6,080 ft.; 7-in. csg. 6,079½ ft.

Stanolind O. & G. Co. No. 16 L. D. Shaw, H.T.&B. Sur. No. 36. R.U.

Stanolind O. & G. Co. No. 2 G. Sheffield, H.T.&B. Sur. Drk.

Stanolind O. & G. Co. No. 3 H. M. Shyrock, H.T.&B. Sur. No. 29. Drlg. 1,510 ft.

Stanolind O. & G. Co. No. 7 W. B. Wooster, A.C.H.&B. Sur. No. 1. Drlg. sh.&L. 4,212 ft.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 5 Bernard, C. Breen Sur. Drlg. sh. 5,136 ft.

Harrison & Abercrombie No. 1 Osberne, C. Breen Sur. Spd.

Harrison & Abercrombie Oil Co. No. 1 Troyer and West Texas Abst. Co., C. Breen Sur. R.U.

Sandy Point—Brazoria County

Stanolind O. & G. Co. No. 3 J. A. Fite, D. Talley Sur. 9⅝-in. csg. 1,027 ft.; drlg. sh. 4,510 ft.

West Columbia—Brazoria County

Frost and Dunnan No. 1 E. S. Parker, Geo. Tennille Sur. Loc.

Mike Hogg No. 1 Varner, M. Varner Sur. Drlg. sh. 1,175 ft.

Sterling Oil & Ref. Co. No. 1 Powers et al, Geo. Tennille Sur. Cg. sd. 5,600 ft.

Texas Co.-Sterling O. & R. Co. No. 6 Phillips, G. Tennille Sur. T.D. 5,700 ft.; tstg.

Texas Co. No. 1 T. Robinson, George Tennille Sur. Drlg. sh. 4,995 ft.

Texas Co. No. 4 T. L. Smith, Geo. Tennille Sur. R.U.

Calhoun—Heyser—Victoria County

Blanco Oil Co. and Buchanan No. 4 C. S. Dunnwoody, A. Sisneros Sur. T.D. 5,760 ft.; 7-in. csg. 5,630 ft.; P.B. 6,530 ft.; tstg.

Blanco Oil Co. et al No. 7 C. S. Dunwoody, A. Sisneros Sur. T.D. 5,500 ft.; tstg.

Geo. Echols No. 8 W. H. Bennett, J. E. Galban Sur. Drk.

Geo. Echols No. 4 Lander, J. Galban Sur. Drlg. sh. 5,612 ft.

Gulf Oil Corp. No. 2 L. P. Schultz, J. E. Galban Sur. Cg. 5,700 ft.

Gulf Oil Corp. No. 3-B T. P. Traylor, J. E. Galban Sur. Spd.

Humble O. & R. Co. No. 18-B P. H. Welder, A. Sisneros Sur. R.U.

Humble O. & R. Co. No. 21-A P. H. Welder, J. M. Rios Sur. Drk.

Magnolia Pet. Co. No. 6 O. M. Lander, J. E. Galban Sur. Drlg. sh. 2,010 ft.

Sinclair Prairie Oil Co. No. 8 W. H. Bennett, A. Sisneros Sur. T. D. 6,048 ft.; S.D.

Sun Oil Co. No. 7 W. N. Coffey, G. E. Galban Sur. R.U.

Seabreeze—Chambers County

Sun Oil Co. No. 1 R. J. Barrow, A. Yarbo Sur. R.U.

Sun Oil Co. No. 1 Seabreeze Ld. Co., H.T.&B. Sur. 102. 10¾-in. csg. 1,948 ft. drlg. sh. 7,836 ft.

Sun Oil Co. No. 1 J. T. White, sec. 118, H.T.&B. Sur. Drlg. sh. 2,459 ft.

Silsbee—Hardin County

Humble O. & R. Co. No. 1 B. L. Kirkendall, NE offset to No. 1 Howell. Loc.

Republic Prod. Co.-Houston Oil Co. No. 2 Ellery fee, J. Ellery Sur. T.D. 6,967 ft.; 7-in. csg. 6,961 ft.; W.O.C.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 Nora Barraco, Reels & Troubough Sur. Drlg. sd.&sh. 422 ft.

Fairbanks—Harris County

Amerada-Stanolind O. & G. Co. No. 1 Maggie L. Peters, W. K. Hamblin Sur., Abst. 317. 10¾-in. csg. 1,197 ft.

E. L. Smith and H. B. Ownby Drlg. Co. Geo. Eyers Sur. R.U.

H. E. Williams No. 1 A. Vega, G. Williams Sur. Drk.

Friendswood—Harris County

H. C. Cockburn et al No. 1 H. C. Cockburn, Wm. K. Smith Sur. Drlg. sdy. sh. 2,600 ft.

Humble O. & R. Co. No. 1 G. Durwood, Perry and Austin Sur. T.D. 6,042 ft.; I.P. 576 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 1 J. L. Jones and E. A. Gray, Perry and Austin Sur. Drlg. sh. 1,078 ft.

Humble O. & R. Co. No. 1-B J. L. Jones, Perry & Austin Sur. T.D. 6,041 ft.; I.P. 610 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 1 N. G. Kildahl, Perry & Austin Sur. T.D. 6,050 ft.; 7-in. csg. 6,037 ft.

Humble O. & R. Co. No. 5 Scott Beamer, T. Choate Sur. Drlg. 710 ft.

Humble O. & R. Co. No. 2 J. J. Settegas, Perry and Austin Sur. Drk.

Humble O. & R. Co. No. 1 E. E. Watson. Drk.

Hitchcock—Galveston County

N. W. Hunter No. 2 M. Stewart, J. Spillman Sur. Drlg. sh. 5,066 ft.

LaBelle—Jefferson County

Sun Oil Co. No. 3 Broussard-Hebert, B. Blackman Sur. R.U.

North Cheek—Jefferson County

Magnolia Pet. Co. No. 3-A Phelan, S. Stevers Sur. Crooked hole; drlg. sh. 6,537 ft.

Hardin—Liberty County

Ark. Fuel Oil Co. No. 1 W. J. Green, A. B. Hardin Sur. Bldg. Drk.

Atlantic Ref. Co. No. 1 J. V. Cessna, H. B. Johnson Sur. Drlg. sh. 4,468 ft.

Atlantic Ref. Co. No. 2 W. McMurtry, H. B. Johnson Sur. Spd.

Jack Frazier No. 2 B. F. Hanchey, H. B. Johnson Sur. T.D. 7,631 ft.; tstg.

Jack Frazier No. 1 W. McMurtry, H. B. Johnson Sur. T.D. 7,794 ft.; recvd. oil on D.S.T. 7,605-17 ft.; tstg.

Gulf Oil Corp. No. 1 J. C. Barfield, H. B. Johnston Sur. Drk.

Gulf Oil Corp. No. 1 J. H. Cessna, H. B. Johnson Sur. Drlg. sh.&L. 7,356 ft.

GULF COAST WILDCATS

Brazoria County

Pure Oil Co. No. 1 Clemons State Farm, S. F. Austin 7½ Lge. R.U.

Pure Oil Co. No. 1 Smith, S. F. Austin Sur. 9⅝-in. csg. 7,734 ft.; drlg. sh. 9,334 ft.

Texas Co. No. 4 Freeport Sulphur Co., C. Arriola Sur. 10-in. csg. 1,214 ft.; T.D. 3,900 ft.; P.B. 2,564 ft.; sdtrkd.; T.D. 3,000 ft.; P.B. to sdtrk.; cd. sd. oil odor 3,539-48 ft.; T.D. 3,894 ft.; P.B. drlg. sd.; sdtrkd. hole.

Chambers County

A. A. Cameron et al No. 1 White, Solmon Brill Sur. R.U.

Leverne Decker et al No. 1 Broussard Trust, sec. 30, H.T.&C. Sur. R.U.

Standard Oil Co. of Texas and Salt Dome Oil Corp. No. 1 State, Galveston Bay. T.D. 6,030 ft.; 7-in. csg. 5,955 ft.; tstg.

Colorado County

Coyle-Concord No. 1 Hancock-Broussard Hill Duffner Sur. 10¾-in. csg. 1,098 ft.; T.D. 6,241 ft.; abd.

Harris County

W. S. Howell No. 1 Root, A. McCormick Sur. Drlg. sh. 2,512 ft.; no report.

Humble O. & R. Co. No. 11 Rohlfs, John Sellers Sur. Drlg. sh. 6,967 ft.

Jackson County

Magnolia Pet. Co. No. 1 West Ranch, R. Musquez Sur. Drlg. sh. 6,296 ft.

Jefferson County

I. E. Harwell No. 1 State, Gulf of Mexico. S.D. 4,050 ft.

Humble O. & R. Co. No. 1 State, Gulf of Mexico, sec. No. 8. Bldg. drk.

Glenn McCarthy No. 1 J. E. Broussard, C. Hillbrand Sur. T.D. 7,732 ft.; recvd. 29 thribbles of oil, 4 thribbles of S.W. 7-in. csg. on bttm.; perf. csg. 7,730-32 ft.; rec. 1,750 ft. oil, 250 ft. S.W.; squeezed off perfs.; W.O.C.; perf. csg. 7,718-27 ft.; flwg. 6 bbls. fluid per hr., 40% brksh. wtr.; killed well; sqzd. off perfs.; perf. 7,715-25 ft.; flwd. 105 bbls. oil, 18 bbls. brksh. wtr. in 24 hrs.; 9/64-in. ck.

Pierce Est. et al No. 1 Paul Kruger, Nel. C. Warren Sur. R.U.

Matagorda County

Pierce Estate No. 1 Pierce, I.&G.N. Sur. No. 7. T.D. 7,374 ft.; P.B.; cd. sd. in sdtrkd.; cd. 6,624 ft.; 10-min. D.S.T. 6,617-24 ft. showed 200 ft. oil-cut mud; run csg.

Sun Oil Co. No. 1 Fred Robbins, C. H. Vandeveer Sur. Drlg. sh. 9,497 ft.

Polk County

C. E. Gates No. 2 I. O. Jackson, J. W. Abbey Sur. Spd.

Wharton County

Strake Pet. Co. No. 1 Strunck, L. P. Jennings Sur. T.D. 9,496 ft.; abd.

S. W. TEXAS WILDCATS

Atascosa County

L. W. Steiren No. 1 Crawford, 4 mi. W of Anchorage. T.D. 3,880 ft.; prep. to P.B. and test Austin chalk; P.B. 3,680 ft.; swbd.; lnr. collapsed; to reset.

Bastrop County

J. W. Bibb No. 1 Lentz, F. Wilkenson Sur. Top Austin Chalk with odor of oil 2,530 ft.; T.D. 2,514 ft.; 5½-in. csg. 2,443 ft. tstg.; showing some oil; R.U. to pmp.

R. C. Franklin No. 2 Yarrington, Jose Manuel Bangs Sur. Drk.

Bee County

Dirks Bros. No. 1 Mangus Beck, sec. 17, Chittim Miller Ranch Subd. T.D. 4,273 ft.; perf. csg. 4,219-22 ft.; flwg. gas and S.W. through ¼-in. ck.; T.P. 850 lbs.; C.P. 1,250 lbs.

H. E. Pressy No. 1 F. H. Pressy, C. Williams Sur. Drlg. sh. 1,210 ft.

Bexar County

Hikok & Reynolds No. 1 Elvert, Thomas York Sur. Drlg. 1,440 ft.

Joe H. Noake No. 1 Oppenheimer, W. Miller Sur. No. 180. Loc.

Chas. Persyn No. 1 fee, Wm. Lindsey Sur. Drlg. sh. 1,210 ft.; no report.

Caldwell County

D. L. Byrd No. 1 Parr, Jas. Hinds Sur., Abst. 125. Drlg. sh. 1,036 ft.

Mac-Wag-Tree Oil Co. No. 1 Roberts, W. House Sur. T.D. 2,633 ft.; L.; 5½-in. csg. 2,517 ft.; pmpd. 50 bbls. sulfur wtr. per day; prep. to D.D.

Cameron County

Saxet Prod. Co. No. 1 Port Isabel Irrig. Co. Sur. 30. Drk.

De Witt County

Caldaboard Corp. No. 2 Afflerbach, I. W. Criswell Sur. T.D. 4,486 ft.; abd.

Dimmitt County

Teas & Maryland Corp. No. 1 McKnight, Blk. 13, sec. 23. Base of Austin Chalk 5,201 ft.; top Georgetown L. 6,120 ft.; S.D. 6,955 ft.

Duval County

Cown & Sorey No. 1 Taylor, J. Poitevent Sur. 214. T.D. 1,467 ft.; hole bridged.

Adolph Devore No. 1 E. R. Hagist, Sur. 265. T.D. 1,748 ft; pulled drk in.

Gillespie & Sons No. 1 Hamilton, J. Poitevent Sur. No. 85. 10¾-in. csg. 101 ft.; drlg. sd. 3,327 ft.

Frank Gravis No. 1 Megargal, J. Boyles Sur. R.U.

Magnolia Pet. Co. No. 1 Duval County Ranch Co., Sur. No. 195. 10¾-in. csg. 83 ft.

Magnolia Pet. Co. No. 1 A. Lopez, M Lopez Sur. No. 82. Drlg. sd. 6,950 ft.

Southwood Oil Co. No. 1 Nolen, P. Cabello Sur. and F. Thompson Sur. No. 106. Drlg. sh. 5,450 ft.

Trinity Drillers No. 1 Peters, C.C.S.D. Sur. 66. Drlg. sh. 2,376 ft.

Edwards County

Amon G. Carter No. 1 Sweeten, SE¼ Blk. 2, Sur. 49. T.D. 5,111 ft.; 9-in. csg. 5,030 ft.; drlg. L. 6,501 ft.

Dan Auld No. 1 Henderson, sec. 46, Blk. E. 7-in. csg. 1,865 ft.; S.D. 3,190 ft.

Guadalupe County

E. A. Hearn et al No. 1 Dudelof, Jas. D. Clements Sur. Drlg. sh. 720 ft.; no report.

Kreiger & Douglass No. 1 Oliver, R. Smith Sur. S.D. 2,363 ft.

Riddle Oil Co. No. 1 Weber, Guadalupe Torres Sur. Drlg. sh. 320 ft.; no report.

Hidalgo County

Atlantic Ref. Co. No. 1 American Rio Grande. 7-in. csg. 8,505 ft.; T.D. 9,104 ft.; 5-in. csg. on bttm.; perf. csg. 8,298-9,005 ft.; flwg. 19 bbls. dist. per day; ⅜-in. ck.; tstg.; squeezed off perf.; perf. csg. 8,634-42 ft.; flwd. 71 bbls. 51-grav. dist., 14 bbls. of wtr. per day; ⅜-in. ck.

Jim Hogg County

Hamill & Smith No. 1 Holbein, sec. 9, Blk. 54, Las Animas Gr. T.D. 3,085 ft.; abd.

W. L. Stephens et al No. 1 Grey, Simon De Hinojosa Gr. 10-in. csg. 41 ft.; core 2,833 ft.

Jim Wells County

H. M. Hill et al No. 1 Kuether, Lots 70 and 75, sec. 52, Haldeman Subd. S.D. 3,342 ft.

H. H. Howell et al No. 1 Goldapp, Jose Maria Garcia Sur. Drlg. sh. 2,910 ft.

Magnolia Pet. Co. No. 8 Seeligson, A. Rameriz Sur. 13⅜-in. csg. 1,206 ft.; drlg. sh. 4,576 ft.

Rowan & Hope No. 1 Robert Adams, T.&N.O. Sur. No. 19. 13⅜-in. csg. 1,155 ft.; drlg. wtr. sd. 4,471 ft.

Karnes County

Randon Oil Co. No. 1 Radford, M. T. Carolos Martinez Sur. Drlg. sh. 2,600 ft.

Kleberg County

Magnolia Pet. Co. No. 1 Dietz, Gabriel Trevino Sur. 13⅜-in. csg. 1,220 ft.; drlg. sh. 7,350 ft.

Pure Oil Co. et al No. 1 State Ld., Tr. 68, Laguna Madre Bay, Lse. No. 528. Dredging canal.

Lasalle County

Ralph B. Reed No. 1 Yeager, Blk. 7, Sec. 8, Wallace Subd., Yeager ranch. S.D. 1,320 ft.

Lee County

Jas. E. Pederson No. 1 Turner, David Hudson Sur. S.O.&G. 6,140-80 ft.; sdtrkd. at 4,600 ft. and drld. to 6,132 ft.; S.O.&G.; set csg. 6,021 ft.; acdzg. with 20-bbl. load; when opened well flwd 20-bbl. head and went dead; swbd. oil

and wtr.; acd.; pulling tbg. to rework and wtr.; acd.; S.D.
Eleoussa Oil Co. No. 1 Sanders, J. Vin Roeder Sur. S.D. 3,995 ft.

Live Oak County

James Chew No. 1 Alma McNeil, Alexander Parks Sur. T.D. 5,076 ft.; 7-in. 5,076 ft.
Louis Franklin No. 1 Russell, John Hefferman Sur. R.U.
Harvey & Henderson No. 1 Nichols, Thos. Henry Sur. Drlg. sh. 1,744 ft.
Holland Oil Co. No. 2 Alamo Lbr. Co., Josefa Gemenez Sur. Drk.
Karotkin & Richardson No. 1 Pape, Wm. R. Conner Sur. R.U.
Loma Oil Co. No. 2-B Reagan, Wm. Hely Sur. Spd.
Ray L. Martin No. 1 Adams, J. Buchannan Sur. S.D. 178 ft.
J. I. Newton No. 1 George West Est., Airy Pieratt Sur. No. 129. Drk.
Parr & Delaney No. 1 Hogan & Stewart, A.B.&M. Sur. 45. Drk.
J. P. Payzor No. 1 San Antonio Joint Stock, J. J. Roberts No. 1 Mahone. S.D. 923 ft.
V. G. Schimmel et al No. 1 Geo. West, G. L. Haas Sur. Drlg. sd. 210 ft.

Milam County

Texedo Oil Co. No. 1 Graham, Charles Cornea Sur. S.D. 880 ft.
Texedo Oil Co. No. 1 Paul Garves, C. Robertson Sur. Drlg. sh. 900 ft.

McMullen County

Duncan Drlg. Co. No. 1 Martin Henry sec. 6. S.D. 707 ft.
J. H. Reynolds No. 1 J. H. Shiner, sec. 82, Shumway Subd. Drlg. sh. 2,050 ft.
Richardson & McCarthy No. 2 Martin, Sur. No. 7. T.D. 546 ft.; abd.
Rowan and Nichols No. 2 Rhodes, H.& G.N. Sur. T.D. 1,730 ft.; abd.

Medina County

J. R. Trentman et al No. 1 Carle Merc. Co., V. A. Johnson Sur. Drlg. sh. 495 ft.; no report.

Nueces County

C. Andrade No. 1 John Dunn, P. Hinojosa Sur. No. 422. Drlg. sh. 1,210 ft.
Renwar Oil Co. No. 1 C. McKenzie, B. S.&F. Sur. No. 419. T.D. 5,872 ft.; run csg.; flwd. 350 bbls. in 24 hrs.; ⅛-in. ck.; T.P. 980 lbs.; C.P. 1,075 lbs.
Renwar Oil Co. No. 1 Morgan, A.B.& M. Sur. 10¾-in. csg. 101 ft.; drlg. sh. 5,475 ft. in sdtrkd. hole.
Rutherford Oil Corp. No. 1 L. A. Stewart, Denman Sur. T.D. 6,212 ft.; no show; will D.D.
Union Prod. Co. No. 1 Simmons, 1,000-ac tr., Agua Dulce Gr. T.D. 8,706 ft.; P. B. 4,810 ft.; perf. csg. 4,810-35 ft.; comp.; no ga.

Refugio County

Continental Oil Co. No. 1 Scott Hrs., Dona A. Reogas Sur. 10¾-in. csg. 1,490 ft.; drlg. sh. 4,736 ft.
Hogan Oil Co. No. 1 Kelley, M. & A Roache Sur. T.D. 6,437 ft.; P.B. 6,002 ft.; perf. csg. 5,992-6,006 ft.; flwd. 150 bbls. fluid per day, 15% oil, balance S.W.; well died; R.U. to pmp.
Hogan Oil Co. No. 2 Kelly, J. Powers Sur. Drlg. sh. 4,736 ft.

San Patricio County

A. L. Bob No. 2 Green, T. T. Williamson Sur. Drlg. sh. 6,689 ft.
J. W. Cain et al No. 1 G. E. Guy, Geo. H. Paul Subd. Drlg. 2,610 ft.
Conroe Drlg. Co. No. 1 J. R. Daugherty, Jas. McGloin Sur. Drlg. sh. 6,446 ft.
D. W. Moore No. 1 Kelly, J. H. Drummon Sur. Drlg. sh. 2,767 ft.
Plymouth Oil Co. No. 1 Brigham, Geo H. Paul Subd. T.D. 5,665 ft.; rmg. for test.

Starr County

J. L. Collins No. 1 Francisco B. Guerra, Santa Cruz Gr. Drlg. sh. 5,440 ft.
Sun Oil Co. No. 2-D Guerra, La Sacatosa Gr., 2 mi. SW of Cuevitas field. Drk.
Transwestern Oil Co. and Davenport No. 3 Slick, sec. 527. T.D. 6,862 ft.; rec. 40 but 75 ft. pipe; 5½-in. csg. 4,500 ft.; perf. csg. 4,212-30 ft.; flwg. wash wtr., some dist. through 7/64-in. ck.; comp.; no ga.

Uvalde County

H. F. Wilcox O. & G. Co. No. 1 Morris, M. Carrello Sur. Drlg. sh. 210 ft.

Victoria County

W. V. Bowles No. 2 Robertson, T. C. Burnham Sur. R.U.
Harry L. Edwards No. 1 Robertson, T. C. Burnham Sur. Drlg. sh. 5,212 ft.
Portilla Drlg. Co. No. 1 P. H. Welder, S.A.&M.G. Sur. Drk.
Superior Oil Co. of Okla. and L. A. Gillespie No. 1 Mahon and Buhler, San Antonio Valley Ditch Sur., Abst. 368. 10-in. csg. 849 ft.

Webb County

Boysen & Jones No. 1 Watkins, San Casimero Gr. Drlg. sh. 3,056 ft.
Colton, Leslie and Mitchell No. 1 Lopez, F. Lopez Sur. 55. T.D. 2,801 ft.; perf. csg. 1,694-99 ft.; swbd. brksh. wtr.; S.S.O.
Gilcrease Oil Co. No. 1 Trofton, M. Lopez Sur. 282. 10¾-in. csg. 46 ft.; S.D. 75 ft.
Smith & Storey No. 1 Haines, Sur. 234. T.D. 1,912 ft.; abd.

Willacy County

Magnolia Pet. Co. No. 1 Armendaiz, San Juan DeCarricitos Gr., Sh. 4. Drlg. sh. 9,075 ft.

Zapata County

J. W. Edwards No. 1 Garza, El Zoro ranch, Comitas Gr. Cg. sh. 1,651 ft.
Killam & Radcliff No. 1 Rodriquez, Blk. 10, Sh. 12. Drlg. sh. 350 ft.

EAST TEXAS
(Border Counties)

Rodessa—Cass County

Bay Oil Co. No. 5 Cobb, G. Crowder Sur. Set 13⅜-in. csg. 240 ft.; W.O.C.
Bay Oil Co. No. 2 E. Parker, G. Crowder Sur. R.U.
Magnolia Pet. Co. No. 12 Rives, John Collum Sur. Drlg. sh.&L. 3,100 ft.
Union Prod. Co. No. 5 Bangus Unit, Tromwell Sur. Rmg. 6,007 ft.
G. H. Vaughn No. 1 Riley, J. Taylor Sur. Drlg. chk. rk. 2,550 ft.

Bowie County

King Oil Co. No. 1 Ames, J. A. Tolbott Sur. D.S. stuck 3,910 ft.

Harrison County

Ark.-La. Gas Co. No. 1 C. M. Abney, E. Little Sur. T.D. 4,820 ft.; bldg. drk.; reconditioning hole.

Marion County—Rodessa

Arkansas-Louisiana Gas Co. No. 1 Holland, Hanks Sur. Drlg. L. 5,271 ft.
Ark.-La. Gas Co. No. 3 Wade Houston, Coy, Sur. Drlg. sh.&L. 6,012 ft.
Ark.-La. Gas Co. No. 1 Howard. Thos. Gillespie Sur. Set 16-in. csg. 231 ft.
Geo. Barham No. 2 Brantley, Bennington Sur. Set 5½-in. csg. 5,993 ft.; T.D. 6,022 ft.; comp.; 18 B.P.H.; ¾-in. ck.
Geo. Echols No. 1 Whitfield, R. Bennington Sur. Drlg. sh.&L. 3,332 ft.
Flesh & Hootkins No. 1 Whitfield, Bennington Sur. R.U.
Gulf Ref. Co. No. 1 Beal, Coy Sur. Set 5-in. csg. 6,092 ft.; T.D. 6,111 ft.; comp.; 195 B.P.D. on ¼-in. ck.
Heyser, Heard and Clardy No. 1-B Henderson, U. Ewing Sur. Drlg. 4,866 ft.
Heyser, Heard & Clardy No. 3 Henderson, Bennington Sur. Drlg. sh.&L. 5,860 ft.
Phillips Pet. Co. No. 1 Benefield, Hanks Sur. Drlg. 100 ft.
Phillips Pet. Co. No. 1 Denton, Coy Sur. Drlg. sh. 1,826 ft.
Phillips Pet. Co. No. 1 Henderson, Gillespie Sur. R.U.
Phillips Pet. Co. No. 1 Pruitt-Lockett, U. Ewing Sur. Drlg. sh.&L. 5,715 ft.
Shell Pet. Corp. No. 2 Cooke, Bennington Sur. Set 7-in. csg. 6,057 ft.; T.D. 6,087 ft.; comp.; 474 B.P.D. on ¼-in. ck.
Shell Pet. Corp. No. 1 Whelan, Thos. Gillespie Sur. Drk.

Panola County

Glassell et al No. 1 Pierce & Chesbro, Soaps Sur. O.W.W.O.; old T.D. 5,881 ft.; W.O.
H. E. Preston et al No. 1 Rushing Est., Manning Smith Sur. T.D. 3,028 ft.; M.I. rig.

WEST TEXAS WILDCATS

Andrews County

Rogers & Rogers No. 1 O. B. Holt, P.S.L. Sur. W.O.C. 4,260 ft.
Seaboard Oil Corp. No. 1 Munger-Nix, sec. 1, Blk. A-4, P.S.L. Sur. Drlg. 3,265 ft.
H. C. Wheeler No. 1 T. M. Gardner, sec. 15, Blk. A-35, P.S.L. Sur. Drlg. 965 ft.

Bailey County

Duffey & Etz No. 1 Enochs, Tract 66 League 182, Floyd Co. School Lands Sur. Tstg. 4,160 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd sec. 66, Blk. 10, G.H.&S.A. Sur. Drlg. 7,162 ft.
Storey No. 1 Wilson, sec. 3, Blk. 212, T & St.L. Sur. S.D. 2,545 ft.

Cochran County

Devonian Oil Co. No. 1 Duggan, Oldham Co. Sch. Ld. Sur. Tstg. 5,044 ft.
J. R. Meeker et al No. 1 Wright, Mills City Sch. Ld. Drlg. plug 4,930 ft.
P. N. Wiggins et al No. 1 Dean, NE cor League 58, Martin Co. School Lands Tstg. 5,077 ft.

Coke County

Barnett Pet. Co. No. 1 J. R. Mims, sec. 39 Blk. W, T.&P. Sur. S.D.O. 1,680 ft.
H. E. Ogden et al No. 1 Rawlins, sec. 390 Blk. B-21. Running tbg. 2,285 ft.

Concho County

Barnett Oil Dev. Co. No. 1 Sims, Abst. 851, Carl Thiele Sur. S.D.R. 110 ft.
Sam Murray No. 1 R. G. Armor, sec. 105, T.&N.O. Sur. Drlg. 275 ft.

Cottle County

F. P. Hinds et al No. 1 Lee, 5 mi. SW of Paducah, A.B.&M. Sur. Cr. 4,385 ft.
Wilcox O. & G. Co. No. 1 Richards et al, sec. 761, Blk. Y, W.&G. Sur. S.D. 275 ft.

Crockett County

Moore Bros. No. 1 Perner, sec. 37, Blk. 2, I.&G.N. Sur. Drlg. 9,086 ft.
J. N. Simpson No. 1 Hoover, G.C.&S.F. Sur. Drlg. bridge 1,931 ft.
Stewart & Cormas No. 1 Hoover, sec. 1, Blk. FF, B.B. Sur. W.O.C. 1,930 ft.

Culberson County

Grisham & Hunter No. 1 fee, sec. 14, Blk. 42, P.S.L. Sur. M.I.S.T.

Dawson County

Albaugh No. 1 Robinson, E.L.R.R. Sur. T.D. 5,038 ft.; tstg.
Atlantic No. 1 Scanlan, sec. 83, Blk. M, E.L.R.R. Sur. P.B. from 4,965 ft. to 4,932 ft.; S.D. 4,932 ft.

Dickens County

J. F. Morrisey et al No. 1 C. L. Bird, sec. 290, Blk. 1, H.&G.N. Sur. S.D.; W.O. 2,000 ft.

Ector County

Bodins et al No. 1 Edwards. Drlg. 4,600 ft.
Wentz Oil Co. No. 1-B Parker. S.D.O. 4,892 ft.; C.O. 800 ft.; O.I.H.
L. H. Wentz Oil Co. No. 1-B Parker. Prep. shoot 4,258 feet.
Melhoan Drlg. Co. No. 1 Gulf Blakeney. Cg. 4,118 ft.

Edwards County

A. P. Carter No. 1 F. D. Sweeten, B.&B. Sur., 2 mi. E of Rock Springs. Drlg. 6,301 ft.
Lyles & Dan Auld No. 1 Henderson, H.E. &W.T. Sur. S.D. 3,200 ft.
Richmond Drlg. Co. No. 1 Brown, G.W. T.&P. Sur. S.D.O. 5,750 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkel. Drlg. 3,564 ft.

Fisher County

Daniel & Rhodes No. 1 Nichless, Geo. W. Lawrence Sur. S.D. 3,340 ft.
General Crude Oil Co. No. 1 Morrow, sec. 185, Blk. 2, H.&T.C. Sur. Drlg. 3,537 ft.
Southern Oil Co. No. 1 Bocat, H.&T.C. Sur. S.D.O. 4,016 ft.

Floyd County

Mills Bennett No. 1 T. Montgomery, F. J. Latham Sur., 6 mi. S of Floydada. T.D. 5,082 ft.; fsg.

Gaines County

Amerada Pet. Corp. No. 1 R. W. Robertson, sec. 196, Blk. G, W.T.R.R. Sur. Fsg. swab 5,112 ft.
Carter, Continental & Plymouth et al No. 1 Geisecke. Drlg. 5,385 ft.
Continental No. 1-45 Moore, sec. 45, Blk. AX, P.S.L. Sur. M.I.M.
Shell Pet. Corp. No. 1 M. B. Robinson, sec. 344, Blk. G, C.C.S.D.&R.G.N.G. Sur. W.O.C. 4,674 ft.

Garza County

Gulf Oil Corp. No. 1 Swanson, sec. 25, Blk. 2, H.&G.N. Sur. Loc.

Glasscock County

O. B. Greathouse No. 1 Burns, sec. 221, Blk. 29, W.&N.W. Sur. M.I.S.T.

Hockley County

Gulf Oil Corp. No. 1 M. G. Gordon, sec. 12, Blk. X, P.S.L. Sur. Drlg. 2,950 ft.
Gulf Oil Corp. No. 1 Mallett Ld. & Cattle Co., sec. 6, Blk. X, P.S.L. Sur. Drlg. 3,785 ft.
Honolulu Oil Co. No. 1-51 Dorthy Slaughter, Labor 51, League 37, Zavalla Co. Sch. Lds. Drlg. 4,013 ft.
Honolulu Oil Co. No. 1-77, Labor 77, League 37, Zavalla Co. Sch. Lds. Loc.
Sid Richardson No. 1 Slaughter, Maverick Co. Sch. Lds. Drlg. 4,812 ft.
The Texas Co. No. 2 Slaughter, Labour 92, League 37, Zavalla Co. Sch. Lds. Drlg. 4,965 ft.; S.O.

Howard County

Lockhart Oil Co. No. 1 Hussinger, sec. 67, Blk. 29, W.&N.W. Sur. Drlg. 2,477 ft.
W. F. McDermott et al No. 1 Lucas, sec. 18, Blk. 29, Twp. 1n, T.&P. Sur., 5 mi. N of Dodge pool. Drlg. 3,077 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp 6 Drlg. 3,794 ft.
Haymon Krupp No. 1 Briggs, sec. 24, Blk 73, Twp. 7, T.&P. Sur. Drlg. 2,765 ft.

Jeff Davis County

Joiner Oil Corp. No. 1 Jones-Coffield. S.D. 3,500 ft.

Kent County

Thad A. Bryant Jr. No. 1 Haggins et al, sec. 118, Blk. 1, H.&G.N. Sur. R.U.

Lamb County

Toddie L. Wynne, Tr. No. 1 Neuenschwander, Labour 1, League 660, State Cap't. Lds. Drlg. 4,870 ft.

Loving County

Barnett Pet. Co. No. 1-A Johnson, sec. 2 Blk. 57, Twp. 1, T.&P. Sur. Drlg. 3,900 ft.
Bryant-Caraway et al No. 1 House, Pre-Emption Sch. Lds., sec. 10. Setting surface csg.
Carpenter & Grierson No. 1 Mrs. Bennie Barnes, sec. 22, Blk. C-25, P.S.L. Sur. Loc.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., sec. 151, H.E.&W.T. Sur. Drlg. 2,077 ft.

McCulloch County

Westbrook et al No. 1 Johnson, A. Nevendorf Sur. S.D. 1,836 ft.
Nixon No. 1 Pierce. S.D. 1,001 ft.

Martin County

Harris-Anderson Oil Corp. No. 1 Mollie Robinson, sec. 33, Blk. 38, T.&P. Sur. S.D. 4,189 ft.

Menard County

G. A. Clements No. 1 Murchison, sec. 80, B.S.&S. Sur., 8 mi. E of Menard. Drlg. 855 ft.
C. D. Haggerty No. 1 Callon, sec. 36, Jim Franz Sur. Spud. and S.D.

Pecos County

Harry Baker et al No. 1 White & Baker, sec. 53, Blk. 194, C.C.&S.F. M.I.M.
J. J. Dorr et al No. 2 Payton, sec. 99, Blk. 8, H.&G.N. Sur. Cellar and pits.
Ed Falney No. 1 Trees, sec. 63, Blk. 8, H.&G.N. Sur. T.D. 2,055 ft.; will dpn.
Magnolia Pet. Co. No. 1 McKee. Drlg. 5,302 ft.
Messenger & Osborn No. 1 Humble-Young, sec. 49, Blk. 10, H.&G.N. Sur. Acid. 1,807 ft.; pmpd. 35 B.O. 35 hrs.; S.D.
S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. S.D.O. 3304 ft.
Thompson & Minahall No. 1 Michaelson, 660 ft. N and W, sec. 24, Blk. 146, T.& St.L. Sur. S.D. 3,187 ft.
Trans-Pecos Oil Co. No. 1 Gallagher, T.&P. Sur. S.D. 1,610 ft.
Trans-Pecos Oil Co. No. 3-A Papham, G.H.&S.A. Sur. S.D. 1,934 ft.
Wilcox O. & G. Co. No. 1 Serf, sec. 27, Blk. 130, T.&St.L. Sur. Drlg. 1,565 ft.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk. 12, G.H.&S.A. Sur. Drlg. 4,375 ft.

Reeves County

Barnett Pet. Corp. No. 1 Ely, sec. 38, Blk. 71, P.S.L. Sur., 12 mi. NW of Toyah. S.D.R. 3,806 ft.
Ohio Oil Co. No. 1 Papham, sec. 18, Blk. 54, T.&P. Sur. Drlg. 850 ft.

Runnels County

E Z Oil Co. No. 1 B. Fletcher, E. C. Good Sur. T.D. 4,394 ft.; P.B. to 4,360 ft.; S.D.O. 4,384 ft.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. S.D. 5,004 ft.
Tex-Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. Drlg. 6,043 ft.

Scurry County

Robinson Drlg. Co. No. 1 Martin, sec. 147, H.&T.C. Sur. T.D. 3,515 ft.; P.B. 2,500 ft.; prep. acidize 3,515 ft.
T. G. Shaw Oil Co. No. 1 First Natl. Bank. S.D. 3,369 ft.

Sterling County

J. W. Sward No. 1 Brennand, sec. 107, Blk. 2, H.&T.C. Sur. S.D. 170 ft.

Stonewall County

General Crude Oil Co. No. 1 J. D. Smith, sec. 371, Blk. 2, H.&T.C. Sur., 12 mi. N Rotan. Drlg. 1,975 ft.
Swanson & Parriott No. 1 H. T. Carlisle, sec. 293, Blk. D, H.&T.C. Sur. M.I.M.

Sutton County

A. A. Basse and S. J. Sackett No. 1 W. A. Miers, sec. 54, Blk. 14, T.W.&N.G. Sur. S.D. 55 ft.
Ordovician Oil Co. No. 1 Evans, sec. 1, L. Stubblefield Sur., 32 mi. SE of Sonora. W.O.C. Drlg. 4,125 ft.; topped Ellenburger 4,085 ft.

Terrell County

D. & S. Oil Co. No. 1 Sam Bell. Drlg. 500 ft.

Terry County

C. H. Hutto No. 1 Brownfield, E.L.R.R. Sur. S.D. 687 ft.

Tom Green County

Humble O. & R. Co. No. 1 Lewis & Wardlaw, sec. 5, Blk. 17, H.&T.C. Sur. Drlg. 5,456 ft.
Southern Cross Oil Co. No. 1 J. W. Wilson, sec. 30, Blk. H, A.B.&M. Sur. Loc.
Spinner No. 1 Reed, Mason Ferry Ranch Sur. U.R. 5-in.; S.D. 3,550 ft.

Upton County

W. D. Riser et al No. 1 King Ranch Oil & Lignite Co., sec. 8, Blk. 3, M.K.&T. Sur. Fsg. 730 ft.
Rutter et al No. 1 Egolb, sec. 5, J. H. Gibson Sur. Blg.; T.D. 3,294 ft.; S.D.O. 3,295 ft.
J. S. Pitman No. 1 D. Elder, C.C.S.D.& R.G.N.G. Sur., Blk. 3, sec. 14. Drlg. salt 2,050 ft.

Ward County

Cities Service No. 2 Brandenburg, sec. 4, Blk. 32, H.&T.C. Sur. Tstg. 2,092 ft.
M. J. Delaney No. 1 J. E. Cooper, H.&T.C. Sur. S.D.O. 3,021 ft.
J. E. Fitzpatrick et al No. 1 H. B. Carr, sec. 125, Blk. 34, H.&T.C. Sur. S.D. 123 ft.; R.U.S.T.
J. E. Fitzpatrick et al No. 1 F. K. Dyer, sec. 135, Blk. 34, H.&T.C. Sur. S.D. 1,000 ft.
Hoss & Downey No. 1 Mevers, sec. 17, Blk. 32, H.&T.C. Sur. Spd. and S.D.
Hoss & Downey No. 1 Ross Avery, sec. 36, Blk. 1, H.&T.C. Sur. Drlg. 1,050 ft.
Patillo & Webster No. 1 Johnson. Prep. run csg. 1,870 ft.
Sayre Oil Co. No. 1 Bertner, sec. 34, Blk. 1, H.&T.C. Sur. Drlg. 60 ft.
O. E. Schkode No. 1 Boogher, sec. 1, Blk. 32, H.&T.C. Sur. Drlg. 160 ft.
H. I. Wald No. 1 Brown Hrs., sec. 34, Blk. 1, H.&T.C. Sur. Drlg. 1,610 ft.
L. F. White et al No. 1 Rector-Monroe, E cor. sec. 3, Blk. 1, W.&N.W. Sur. S.D. 4,710 ft.

Yoakum County

Bahago & Bond Oil Corp. No. 1 J. L. West, sec. 607, Blk. D, J. H. Gibson Sur. Reaming 5,216 ft.
Gulf No. 1 J. C. Futch, sec. 796, Blk. D, J. H. Gibson Sur. Drlg. 1,630 ft.
Humble No. 1 Abilene State Bank, sec. 37, Blk. AX, P.S.L. Sur. Drlg. 2,215 ft.
Ohio No. 1 Claywater, sec. 638, Blk. D, J.H. Gibson Sur. R.U.R.
Shell No. 1-C Baumgart, sec. 866, Blk. D, J. H. Gibson Sur. Cg. 4,846 ft.
Texas Co. No. 1 Walker, sec. 794, Blk. D.

El. 3,656 ft.; T.D. 5,180 ft.; P.B. 5,162 ft.; S.D. 5,162 ft.
Stogner & Pipkin No. 1 Blade, J. H. Gibson Sur. S.D.O. 5,307 ft.

E. C. TEXAS WILDCATS

Anderson County

H. L. Parsons No. 1 H. B. Hemby, 7 mi NE of Navarro. Comp.; 45,000,000 ft. gas.; T.D. 5,487 ft.

Angelina County

J. C. Bonham No. 1 Cameron Lbr. Co. E. Miller Sur., 3 mi. SE of Zavalla. Skidding drk.
Gar-Flo Oil Co. No. 1 J. L. Russell, J. Morin Sur., 3 mi. E of Dibol. Drlg. 2,410 ft.
Ginter Co. No. 3 Copes Heirs, J. Morin Sur., 4 mi. E of Dibol. S.D. 1,200 ft.
C. E. Parrott No. 1 J. C. Burres, W. Plucker Sur., 2½ mi. W of Huntington. Drk.

Cherokee County

Grey & Waife No. 1 Dupree, Lewis Jordan Sur., 2 mi. S of Rusk. T.D. 5,170 ft.; dry and abd.
J. G. Mayo et al No. 1 J. H. Bowlery, W. H. Walters Sur. Drlg. 1,066 ft.
Merica Oil Co. No. 1 Cherokee Dev. Co., A. J. Acker Sur., 2 mi. E of Maydelle. M.I.M.

Dallas County

Plaza Oil Co. No. 1 Davidson, Marchants Sur., 1 mi. NW of Seagoville. Spudded.

Falls County

McCleod et al No. 1 F. Bolton, J. R. Cockrill Sur., 4 mi. NW Rosebud. Fsg 1,708 ft.

Freestone County

C. E. Rossiter No. 1 J. P. Fulton in J. P Fulton Sur., 2½ mi. E of Donie. S.D. 956 ft.

Grayson County

Denver Prod. & Ref. Co. No. 1 E. B. Moore, E. Barnes Sur., ½ mi. NW of Whitesboro. Drlg. 622 ft.

Gregg County

Humble O. & R. Co. & Gulf O. Corp. No. 1 E. Robertson, M. Mann Sur., 2½ mi SW of Longview Trinity test. El. 273 ft.; drlg. 8,417 ft.

Henderson County

Howard Pet. Co. No. 1 H. W. Barton, A. J. Allen Sur. S.D. 350 ft.

Hill County

J. Willis No. 1 W. P. Ball, S. Marshall Sur., 3 mi. NW of Covington. M.I.M.

Houston County

Peyton Bros. No. 1 J. N. Daniels, J. M. Procella Sur., ½ mi. N of Procella. M.I.M.

Lamar County

Cooper Bros. No. 2 L. B. Hayes, L. Roberts Sur. Loc.

Leon County

Lone Star Gas No. 1 Sarah Melasky, 1 mi. S of Buffalo pool. Drlg. 2,440 ft.

Limestone County

C. L. Brown No. 27 N. B. Boyd, R. B Longbotham Sur., 3 mi. S of Worthan T.D. 1,402 ft.; oil sd.; S.D.W.O. 1,455 ft
J. S. Cosden, Jr. No. 1 J. J. Bower, J. Breeding Sur., near Prairie Hill. Loc.
Stanolind O. & G. Co. No. 1 T. Norris, in Thresher Sur., 5 mi. N of Kosse; 6,500 ft. test; elev. 528 ft.; cg. 8,610 ft.

McLennan County

Chapman & Kahn No. 1 Carl Hartsman, B. C. Walters Sur., 1½ mi. S of McGregor. Drlg. 810 ft.
Kilgore No. 1 J. M. Marrs, J. S. Rutland Sur., 2 mi. S of Bosque. Drlg. plug 201 ft.

Navarro County

Natural Pet. Co. No. 1 Karen Brown, W. T. Turner Sur., 2 mi. E of Roane. Drlg. 520 ft.
Orchard & Biddle No. 1 Gibson, 6 mi. SW of Rural Shade, J. Bird Sur. Pits.
Mrs. Jane Robinson No. 1 Fortson Bros., Eli Smith Sur., 5 mi. NE Corsicana. Drlg. 2,240 ft.
T. Sharpe et al No. 1 E. B. McDowell, T Jordan Sur., 1½ mi. S of Bassets. S.D. 3,160 ft.

Smith County

Mayo-Housh & Thompson No. 1 J. B. Mayfield, Wm. Keys Sur., 4 mi. SE of Tyler. M.I.M.

Trinity County

Blinoski et al No. 1 Trinity State Bnk., B. F. Wright Sur., 2 mi. S of Trinity. S.D. 120 ft.

Upshur County

Tom Hunter and American Liberty No. 1 J. P. Carter, J. H. Fields Sur. T.D. 7,111 ft.; U.R.
L. & G. Oil Co. No. 1 H. Williams, Roeder Sur., 2 mi. NW of Gracetown. T.D. 4,009 ft.; dry and abd.

NORTH TEXAS WILDCATS

Archer County

A. H. Bedinghaus No. 1 J. L. Anderson, Blk. 23, S.A.R. Sur. 10-in. 80ft.; W.O.C.
Hull & Silk No. 1 L. F. Wilson, sec. 25, A.T.N.C.I. Sur. Loc.
Thos. A. Jirik No. 1 D. L. Wolf, J. Poitevent A-348 Sur. Loc.
Wayne King et al No. 1 C. A. Arthur, sec. 3, G.H.&H. Sur. A-158. S.D. 210 ft.
Lewis Prod. Co. No. 1 W. C. Frey, sec. 17, P.P.S.L. Sur. Drlg. 2,210 ft.

Baylor County

D. S. Kelly No. 1 W. T. Waggoner, sec. 54, T.&N.O. Sur. S.D.O. 1,200 ft.

Clay County

Barnett Pet. Co. No. 1 Ben Nutter, sec. 30, Grayson Co. Sch. Lds. Drlg. 3,418 ft.
Wirt Franklin et al No. 1 Staggs, sec. 34, A.G.S.L. Sur. 12½-in. at 130 ft.; R.U.R.
Walter Gant No. 1 Bryant Edwards, Blk. 10, Marion Co. Sch. Ld. Matl., 6,000-ft. test.
Healdton O. & G. Co. No. 1 Wallace, Belcher Subd. Drlg. 3,882 ft.
Wood Pet. & Roy. Corp. No. 1 I. H. Kempner, Blk. 44, Bosque Co. Sch. Ld. Sur. A-10. R.U.R.

Cooke County

H. L. Nutting et al No. 1 H. P. Ware, A.C.C. Bailey Sur. A-44. Drlg. 825 ft.

Denton County

W. C. Curry et al No. 1 G. F. Owens, N. Rudder Sur. A-1,060. S.S.O. 1,570-80 ft.; S.D.O.

Foard County

Texas Co. No. 14 Johnson, sec. 37, S.P R.R. Sur., Blk. L. Lime 3,760-80 ft.; treating with acid; C.O.

Jack County

Auers et al No. 1 Garrison, W.C.R.R. Sur. A-960. Drlg. 3,140 ft.
G. M. Gillespie No. 1 A. M. Street, sec. 3339, T.E.&L. Sur. U.R. 8¼-in. 2,215 ft.
Hanlon-Buchanan, Inc., No. 1 Ed M. Myers, N. F. Rudmose Sur. A-1,803. O.S. 3,830-40 ft.; shot with 40 qts.; 2,800 ft. of oil in hole; W.O.R.R. com. test.
Jones & Conklin No. 1 R. A. Heffner, H.&G.N. Sur. A-296. Drk.
O. J. Perrin No. 1 J. S. Rhodes, J. W. Coates Sur. A-1240. 6⅝-in. 3,125 ft.; W.O.C.
Taubert & McKee No. 1 R. H. Eatherly, J. H. Henderson Sur. A-1,749. Spud. and S.D.
Van Eman & Richards No. 1 Whitsell, Wm. McElroy Sur. A-599. Fsg. 3,235 ft.

Montague County

H. H. Powell No. 1 Arch Durham, W. J. Wagoner Sur. A-936. Drlg. 275 ft.
J. W. Sorrell et al No. 1 J. E. Walthall, Sam. H. Smith Sur. A-662. S.D.O. 2,720 ft.

Wichita County

Bolin & Whittington No. 1 Waggoner Bros., sec. 21, H.&T.C. Sur. Drk.
King & Fabor No. 1 J. N. George, J. Waldschmidt Sur. A-571. S.D.O. 3,394 ft.
Tom Medders No. 1 E. Fields, sec. 32, H.&G.N. Sur. Drlg. 1,900 ft.
F. W. Merrick, Inc., No. 1 W. T. Waggoner, sec. 35, H.&T.C. Sur., Blk. 5. Drlg. 1,580 ft.
E. T. Noble No. 1 K. P. Abernathy, sec. 9, T.C.S.L. Sur. A-282. R.U.R.
Rathke Oil Co. No. 1 S. B. Burnett "Gulf," sec. 4, H.T.&B. Sur. A-752. 7-in. csg. 3,550 ft.; S.L. 3,552-3,692 ft.; shot 225 qts.; 2,000 ft. O.I.H; C.O. and tstg.
E. J. Stump No. 1 M. P. Bishop, L. Netherly Sur. A-240. S.D.O.; S.L. 3,885-3,997 ft.
Joe A. Worsham No. 1 Waggoner Bros., sec. 13, B.S.&F. Sur. A-343. Bkn. slate and O.S. 3,738-3,870 ft.;shot 180 qts.; flowed 10 min. over mast.

Wilbarger County

Barry & Hayes No. 1 McGill, sec. 3, Blk 9, H.&T.C. Sur. Drlg. 3,710 ft.
Loyd H. Brown No. 1 W. T. Waggoner, sec. 33, Blk. 6, H.&T.C. Sur. Drlg. 3,600 ft.
E. C. Lawson No. 1 Ruitsch, sec. 21, H. &T.C. Sur., Blk 9. Spudding.
T. L. Moore Drlg. Co. No. 1 Mrs. G. E. Blackman, sec. 30, Blk 3, H.&T.C. Sur. Spd.
Phillips Pet. Co. No. 1 W. T. Waggoner "Barger," sec. 11, H.&T.C. Sur., Blk. 14. Drlg. 2,615 ft.
B. R. Rainwater No. 1 J. A. Turkett, Blk. 8, W.C. Sur. Cmt. surf. pipe.

Young County

Anzac Oil Corp. No. 1 E. S. Graham, A Hines Sur. A-135. S.L. 3,667-3,977 ft.; tstg.
N. B. Crenshaw No. 1 J. C. Dwight, sec. 1,444, T.E.&L. Sur. S.D. 400 ft.
Howard Pet. Co. No. 1 G. R. Stewart, sec. 84, C.S.L. Sur. U.R. 8¼-in. 2,840 ft.
Kadane-Griffith No. 1 Sanders, sec. 1989, T.E.&L. Sur. Drlg. 1,350 ft.

RANGER (CENTRAL TEXAS) DISTRICT

Callahan County

R. F. Gilman et al No. 1 W. A. Young, 5 mi. NW Clyde, sec. 37, B.B.B.&C. Sur. T.D. 2,100 ft.
J. H. Howell No. 1 E. I. Vestal, 1,149 ft. E line, 1,000 ft. N line, Jesse Dyson Sur., 2 mi. NE Cross Plains, rotary to 4,000 ft. R.U.R.
Hal Hughes No. 1 Poindexter, sec. 350, Geo. Hancock Sur., 2 mi. NE of Oplin Set 7-in. 3,870 ft.; est. 1,000,000 ft. gas lime 4,369-80 ft., T.D.; 5-in. set., W.O.C.
J. C. Jackson et al No. 1 Thompson, 2 mi S. Eula, sec. 30, B.B.B.&C. Sur. S.D. 1,955 ft.
R. F. St. John No. 1 A. E. Dyer, 4 mi. NW of Clyde, 1,385 ft. from E line and 1,323 ft. from S line of sec. 40, B.B.B. &C. Sur. U.R. 2,670 ft.

Coleman County

J. F. Brock No. 1 J. H. Livingston, SE cor. SW¼ county, J. D. Waters Sur. No. 208. Drlg. 1,050 ft.

Comanche County

N. D. Gallagher et al No. 1 Mrs. B. I Terry, Desdemona pool, N. H. Kuyken dall Sur. S.O. in Ellenburger. Drlg. 4,720 ft.
Dobbs Oil Co. No. 1 Hodges, sec. 11, Blk 2, H.&T.C. Sur.. T.D. 2,710 ft:; acid. 4,000 gal. 2,630-62 ft.; flowing 25 bbls. hourly thru ¼-in. ck.; tstg.

Eastland County

G. D. Chastain et al No. 1 Weddington, 4 mi. N. Cisco, sec. 496, S.P.R.R. Sur. T.D. 4,079 ft.; plugging back.
Hickok Prod. & Dev. Co. No. 1 J. E. Donovan, 5 mi. NW of Cisco, 660 ft. from N and E lines of NW¼ sec. 489, S.P. R.R. Sur. Top Ellenburger 4,247 ft.; S.D.; W.O.C.
J. D. Kittrell No. 1 Reynolds, 5 mi. E of Carbon, sec. 23, H.&T.C. Sur., Blk. 1, S.D. 988 ft.
Lone Star Gas Co. No. 1 M. Thomas, 5 mi. NW of Cisco, 668 ft. from N line and 660 ft. from E line of SE¼ sec. 478, S.P.R.R. Sur. Drlg. 2,600 ft.

Fisher County

Owens-Snebold & A. C. Varner No. 1 J. H. Milsap, 3,500-ft. wildcat, 2 mi. NW McCaulley, 330 SL 330 WL, sec. 61-2, H.&T.B. Sur. Spd.

Haskell County

Fain-McGaha Oil Corp. No. 1 T. G. Hendrick, C W½ sec. 104, Indianola Ry. Sur. M.I.M.
Superior Oil Corp. No. 1 T. G. Hendrick, 330 ft. S line, 330 ft. E line, N½ sec. 9, A. Rodriguez Sur., rotary to 3,500 ft. Drlg. 1,808 ft.

Jones County

J. S. Bridwell No. 1 C. L. Carter, 220 ft. from N and E lines SW SE section 37-15, T.&P. Sur. Spd.
Jack Burleson No. 1 T. J. Lotspeich, 220 ft. from S and E lines of sec. 40-15, T.&P. Sur. Run 6-in. to 1,990 ft., T.D.
Danciger No. 1 Hugh E. Roberts, 220 ft. from S and W lines, E 110-ac., NE¼ sec. 37-15, T.&P. Sur. Spd.
Grisham & Hunter No. 1 E. D. Appling, NW¼ county, 1,208 ft. from S line and 1,450 ft. from W line of SW¼ sec. 32, B.B.B.&C. Sur. Sand 2,640-53 ft.; est. 50 B.O.P.D.; 20 B.W.P.D.; T.D. 4,610 ft.; to plug; dry.
Mack Hayes and Montour Oil Co. No. 1 Chittenden, 7 mi. SE Hamlin, Subd. 18, McMullen & McGloin Sur. 337. Drlg 2,750 ft.
Iron Mountain No. 1 D. J. Herbst, 5 mi. E Hamlin, 330 ft. from N and E Sub. 18, Austin Williams Sur. 339. Fsg. 1,100 ft.
Walter K. Jones No. 1 D. M. Neas, 506 ft. from E and 1,113 ft. from S of Neas 75 ac., D. Bustillos Sur. 189. Set 49 ft. 12½ in; ran 6-in. at 1,784 ft.
F. W. Martin No. 1 B. N. Herndon, 330 ft. from S and W of NW sec. 1, M.E.&P. Sur. Fsg. collapsed csg. 1,750 ft.
F. W. Merrick et al No. 1 C. A. Cox, cent. Cox 119-ac. tr., J. H. Hughes Sur No. 201. Rig.
Oil States Expl. Co. No. 1 Olson, 4 mi. N Avoca, sec. 182, B.B.B.&C. Sur. S.S. oil 4,820 ft. in Caddo lime; S.S. oil 4,984 ft.; top Ord. 5,198 ft. Wtr. 5,259-69 ft. T.D.; plugging.
Owens-Snebold No. 1 Alice Rhodes, 4 mi. W of Nugent, 330 ft. from N and W lines of NW¼ sec. 31, T.&P. Sur., Blk. 15. Lost hole 950 ft.; skd. 20 ft. E; U.R. S.S.O. 1,980-90 ft.; R.B.S.O. 2,227-45 ft.; U.R. 8-in. to 2,800 ft.
Roeser & Pendleton No. 1 fee, 2 mi. NW of Nugent, 2,800 ft. from N line and 3,240 ft. from W line of sec. 4, T.&P. Sur., Blk. 15. U.R. 5-in. from 3,710 to Sur., Blk. 15. Trying shutoff at 3,780 ft.; T.D. 3,877 ft.; H.F.W.; plugging.
B. H. Roth No. 1 D. A. Kinney, 4,000-ft. test, 330 ft. from S and E of NW sec. 7-4, H.&T.C. Sur. Drlg. 1,400 ft.
Dale Smith & Bert Fields No. 1 C. L. Carter, 3 mi. SW of Nugent, 220 ft. from N and W lines of SE¼ of SE¼ sec 37, T.&P. Sur., Blk. 15. Drlg. 1,927 ft.; S.O.; shot 20 qts. 1,875-85 ft.; P.B. to cmt.; comp.; 196 B.O.P.D.
Stanton & Miller No. 1 Gaither, 4½ mi. N of Anson, sec. 38, B.B.B.&C. Sur. S.D. 2,180 ft.
Joe A. Worsham et al No. 1 J. H. Commons, 330 ft. from S and E lines, Steffens Subdiv., Lot 7, A. W. Hill Sur. No. 4. Set 12½-in. at 1,020 ft.

Mills County

Balyaet & Boyd No. 1 Westbrook, 7 mi. W of Goldthwaite, 4,950 ft. from S line and 4,290 ft. from W line of Caldwell Co. Sch. Ld. Sur. T.D. 1,205 ft.; U.R.

Nolan County

Hantho-Nelson, Inc., No. 1 J. H. Withers, C SW¼ sec. 65-21, T.&P. Sur. Wildcat to drill 4,000 ft. Pits.

Palo Pinto County

Brazos River Gas Co. No. 5 M. B. Costello B, 1½ mi. N Pickwick, 1,397 ft. from N line and 150 ft. from W line of survey (W line being river bank), 660 ft. SW No. 4, R. R. Williams Sur. Drlg. 2,860 ft.
W. H. Clement No. 1 Federal Life Ins. Co., 2 mi. W Mineral Wells, sec. 51, T.&P. Sur., Blk. A (E of B). Drlg. 1,510 ft.
Bill Cole et al No. 1 J. W. Harris Est., NW cor. county, De La Garza Sur. S.D. 950 ft.
W. K. Gordon et al No. 1 Johnson, 5 mi. N Gordon, John Bird Sur. Comp.; 5,000,000 ft. gas; T.D. 3,595 ft.
King Oil Co. No. 1 S. F. Lee, 4 mi. NW Graford, 933 ft. from N and W lines of sec. 1,744, T.E.&L. Sur. T.D. 4,362 ft., contract depth.
Ernest Lloyd et al No. 1 McClure, 3 mi. NE Graford, sec. 2,004, T.E.&L. Sur. S.D. 1,200 for csg.

Shackelford County

Danciger No. 2 E. McCown, 330 ft. from S and E sec. 158, B.B.B.&C. Sur., N offset to Haterius. Drlg. 1,800 ft.
Joe DeGrazier No. 1 Harbough, E cen. part of county, sec. 1,563, T.E.&L. Sur. 4,500-ft. test; drlg. 1,000 ft.
Forest Dev. Corp. No. 1 T. G. Hendrick, NW cor. of county, 2,600 ft. from N line and 4,300 ft. from W line of sec. 1, A.B.&M. Sur. Est. 15,000,000 ft. gas per day 1,603-17 ft.; gas 1,662-65 ft., incr. est. 4,000,000 ft., 1,680-85 ft.; est. 1,000,000 ft. 1,804-06 ft. and 1,810-15 ft.; S.S. oil and wtr. 1,864 ft.; inc. wtr. 1,880-82 ft.; fsg. U.R. lugs 2,032 ft., T.D.
Hugh King, Jr., et al No. 2 Davis-Walker, sec. 55-13, T.&P. Sur. S.S.O. 3,427-32 ft.; S.D. 3,450 ft.
Iron Mountain Oil Co. No. 1 E. O. Beck, NW cor. county, 300 ft. from S line and 299 ft. from W line of sec. 162, B.B.B. &C. Sur. Est. 100 bbls. oil per day; 1,905-33 ft., T.D.; ran 6-in.; W.O.C.
C. J. Kleiner et al No. 1 Morris, 2 mi. NE Bluff Creek pool, sec. 187, E.T.R.R. Sur. Run 5-in. to 2,733 ft., T.D.
R. C. Parker No. 1 J. Smalley, NW cor. of NE¼ county, 1,245 ft. from N line and 1,260 ft. from E line of sec. 11, E.T.R.R. Sur. Spd.

Stephens County

Danciger Oil Ref. Co. No. 1 Mrs. Aileen Copeland, 8 mi. SE Ivan, 1,196 ft. from E line and 350 ft. from S line of sec. 1, M.E.P.&P. Sur. U.R. 2,755 ft.
Graham, Hafner, Lane & Inman No. 1 J. N. Yocum, 5 mi. SE of Frankell, 250 ft. from N and E lines of farm or approx. 2,525 ft. from E line and 1,400 ft. from S line of John R. Carter Sur. Drlg. 1,985 ft.
I. C. Little No. 1 R. M. Rogers, NE¼ of county, 150 ft. from E line and 1,980 ft. from S line of sec. 28, T.&P. Sur., Blk. 5. Setting 7-in. to 3,860 ft. to test gas est. at 2,000,000 ft.

Stonewall County

General Crude Oil Co. No. 1 J. D. Smith, SW cor. county, 330 ft. from S and E

(Continued on Page 119)

Rocky Mountain Runs

Production estimates for week ended February 12:

WYOMING

	Barrels
Salt Creek	15,810
Big Muddy	1,260
Byron	1,090
Dallas Derby	560
Garland	2,260
LaBarge	890
Lance Creek	11,410
Los Soldier	1,450
Medicine Bow	3,570
Oregon Basin	1,780
Osage	690
Quealy dome	840
Rock River	2,640
South Casper	490
Wertz	700
Miscellaneous	1,540
Total Wyoming	50,040

MONTANA

Border	60
Cat Creek	610
Cut Bank	7,220
Dry Creek	1,340
Kevin-Sunburst	3,340
Pondera	880
Total Montana	13,110

COLORADO

Florence	610
Fort Collins and Wellington	330
Iles dome	2,550
Moffat	420
Orchard	50
Rangely	110
Tow Creek	150
Price	510
Total Colorado	4,280

NEW MEXICO

Cooper	5,240
Eaves	990
Eunice	27,210
Hardy	1,700
Hobbs	15,040
Jal	1,310
Langlie	2,950
Lynch	640
Lynn	690
Mattix	2,560
Monument	28,510
North Lynch	50
Penrose	4,820
Rhodes	110
Skelly	1,810
South Eunice	2,610
Vacuum	440
Artesia-Maljamar	7,170
Getty	200
Hogback	200
Rattlesnake	740
Table Mesa	40
Total New Mexico	105,030
Total Rocky Mountain region	169,740

Summary of Operations, All Fields, January

Summary of All Operations

Wells Completed

	Comp.	Prod.	Dry	Gas
Eastern fields	365	789	42	75
Lima	2	20	0	1
Central Ohio	61	412	13	34
Indiana	5	0	5	0
Western Kentucky	48	539	18	9
Eastern Kentucky	20	248	3	3
Michigan	69	13,930	22	2
Illinois	35	6,930	7	0
Kansas	155	104,901	33	18
Oklahoma	135	19,377	46	13
No. Central Texas	207	65,546	84	4
West Texas	207	122,513	24	0
Texas Panhandle	72	27,241	5	17
East Texas	168	8,327	7	0
East Central Texas	33	5,490	9	1
East Texas Border	9	2,195	2	1
Gulf Coast Texas	121	43,147	19	4
Southwest Texas	206	24,558	55	19
Arkansas	22	16,040	2	1
North Louisiana	59	28,830	7	9
Gulf Coast La.	58	12,312	32	0
Mississippi	3	0	3	0
Montana	3	150	2	0
Wyoming	12	3,422	1	4
New Mexico	41	14,422	4	1
Total January	2,116	521,334	445	216
Total December	2,478	516,136	535	235
Difference	362	5,198	90	19

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern fields	64	333	397
Lima	2	5	7
Central Ohio	31	99	130
Indiana	0	35	35
Western Kentucky	0	37	37
Eastern Kentucky	1	28	29
Michigan	24	133	157
Illinois	29	110	139
Kansas	54	282	336
Oklahoma	39	319	358
North Central Texas	89	276	365
West Texas	99	338	437
Texas Panhandle	30	128	158
East Texas	44	103	147
East Central Texas	10	36	46
East Texas Border	8	15	23
Gulf Coast Texas	19	107	126
Southwest Texas	53	177	230
Arkansas	19	31	50
North Louisiana	23	73	96
Gulf Coast Louisiana	22	81	103
Mississippi	0	6	6
Alabama	2	0	2
Florida	0	1	1
Montana	2	44	46
Wyoming	7	76	83
Colorado	1	30	31
Utah	1	7	8
New Mexico	7	147	154
Nebraska	0	6	6
Total January	680	3,063	3,743
Total December	696	3,252	3,948
Difference	16	189	205

KANSAS

Summary of Field Operations

County:	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Barber	6	429	2	3	1	5
Barton	35	28,890	8	1	5	20
Butler	5	327	0	0	0	10
Chase	0	0	0	0	0	1
Chautauqua	2	0	1	1	0	4
Clark	0	0	0	0	0	2
Cowley	6	880	2	0	1	14
Elk	0	0	0	0	1	1
Ellis	14	28,827	2	0	2	22
Ellsworth	6	1,127	3	0	1	6
Grant	5	0	0	5	0	0
Gray	0	0	0	0	1	0
Greenwood	2	75	0	0	1	0
Harper	0	0	0	0	1	0
Harvey	0	0	0	0	0	3
Jackson	0	0	0	0	0	1
Jewell	0	0	0	0	0	1
Kingman	0	0	0	0	0	1
Lane	0	0	0	0	0	1
Marion	2	35	1	0	0	2
McPherson	5	1,255	1	0	0	3
Meade	0	0	0	0	1	1
Ness	0	0	0	0	1	5
Pawnee	2	252	1	0	0	1
Phillips	0	0	0	0	0	1
Pratt	4	0	2	2	0	0
Reno	3	1,997	0	1	3	11
Rice	14	16,229	1	1	7	35
Rooks	1	46	0	0	2	3
Rush	3	477	2	0	0	1
Russell	19	20,500	1	0	14	45
Sedgwick	1	0	1	0	1	10
Stafford	8	6,985	3	0	3	17
Stevens	4	0	0	4	0	4
Sumner	3	4,526	0	0	1	8
Trego	0	0	0	0	0	2
Woodson	5	35	2	0	3	22
Ttl. Jan.	155	104,901	33	18	54	282
Ttl. Dec.	212	86,234	68	15	47	302
Difference	57	18,667	35	3	7	20

OKLAHOMA

Summary of Field Operations

County:	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Atoka	0	0	0	0	0	2
Beckham	0	0	0	0	0	2
Bryan	0	0	0	0	0	1
Caddo	2	442	0	1	1	13
Carter	9	4,363	3	0	1	13
Choctaw	0	0	0	0	0	2
Cleveland	0	0	0	0	2	3
Coal	1	0	1	0	0	2
Comanche	0	0	0	0	1	2
Cotton	0	0	0	0	0	1
Creek	9	209	3	0	3	44
Garfield	0	0	0	0	0	2
Garvin	0	0	0	0	1	3
Grady	3	90	0	0	1	3
Grant	0	0	0	0	0	2
Greer	0	0	0	0	0	2
Hughes	4	84	3	0	0	7
Jefferson	8	145	2	0	2	6
Johnston	0	0	0	0	0	2
Kay	5	489	3	0	1	2
Kiowa	0	0	0	0	0	2
Lincoln	6	861	1	1	2	8
Logan	4	0	3	1	0	4
Major	0	0	0	0	1	0
Marshall	0	0	0	0	0	1
Murray	0	0	0	0	0	1
Muskogee	5	47	2	1	1	6
Noble	4	1,855	1	0	3	2
Okfuskee	4	8	3	0	1	6
Oklahoma	4	2,884	0	0	6	14
Okmulgee	9	42	5	1	4	31
Osage	8	26	3	2	0	25
Pawnee	1	13	0	0	0	3
Payne	3	1,715	2	0	0	4
Pittsburgh	2	0	2	0	0	0
Pontotoc	15	3,623	3	3	3	35
Pottawatomie	7	684	2	0	2	13
Seminole	11	1,625	3	0	1	25
Stephens	9	167	0	3	1	6
Texas	0	0	0	0	0	1
Tillman	0	0	0	0	0	5
Tulsa	2	5	1	0	1	10
Washita	0	0	0	0	0	1
Wagoner	0	0	0	0	0	2
Ttl. Jan.	135	19,377	46	13	39	319
Ttl. Dec.	219	31,950	68	16	54	316
Difference	84	12,573	22	3	15	3

WEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Andrews	8	6,133	2	0	4	8
Bailey	0	0	0	0	0	1
Borden	1	0	1	0	0	0
Brewster	0	0	0	0	0	2
Cochran	0	0	0	0	0	2
Coke	0	0	0	0	0	2
Crane	9	8,203	2	0	10	9
Crockett	1	51	0	0	0	4
Culberson	0	0	0	0	0	2
Dawson	0	0	0	0	0	1
Ector	58	41,662	0	0	19	74
Edwards	1	0	1	0	0	3
El Paso	0	0	0	0	0	1
Fisher	8	1,784	2	0	1	9
Gaines	3	2,964	0	0	0	11
Garza	1	0	1	0	0	1
Glasscock	2	1,054	0	0	1	0
Hockley	1	532	0	0	0	4
Howard	13	11,793	1	0	7	25
Hudspeth	0	0	0	0	0	2
Irion	0	0	0	0	0	1
Jeff Davis	0	0	0	0	0	1
Jones	23	9,271	8	0	6	28
Kent	0	0	0	0	1	0
Lynn	0	0	0	0	1	0
Loving	4	524	0	0	1	3
Martin	1	0	1	0	0	0
Mitchell	0	0	0	0	0	2
Menard	0	0	0	0	0	2
Nolan	0	0	0	0	1	0
Pecos	7	1,944	1	0	7	20
Presidio	0	0	0	0	0	1
Reeves	0	0	0	0	0	3
Runnels	0	0	0	0	0	2
Schleicher	0	0	0	0	0	2
Scurry	0	0	0	0	0	3
Sterling	0	0	0	0	1	0
Stonewall	0	0	0	0	0	1
Sutton	0	0	0	0	0	1
Taylor	1	0	1	0	1	3
Terrell	0	0	0	0	0	1
Terry	0	0	0	0	0	1
Tom Green	0	0	0	0	1	2
Upton	12	3,588	0	0	13	21
Ward	22	11,985	2	0	7	36
Winkler	24	16,407	0	0	12	24
Yoakum	9	4,608	1	0	5	19
Ttl. Jan.	207	122,513	24	0	99	338
Ttl. Dec.	248	150,375	44	1	83	366
Difference	41	27,862	20	1	16	28

EAST CENTRAL AND EAST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Anderson	5	178	1	1	3	7
Angelina	0	0	0	0	1	2
Bowie	1	0	1	0	0	2
Cherokee	1	0	1	0	0	3
Dallas	0	0	0	0	0	2
Delta	0	0	0	0	0	1
Falls	1	0	1	0	0	1
Fanning	0	0	0	0	0	1
Franklin	8	2,446	0	0	0	3
Freestone	2	4	1	0	0	1
Gregg	87	4,715	3	0	25	43
Henderson	2	313	0	0	0	2
Hill	0	0	0	0	1	0
Hopkins	1	11	0	0	0	0
Houston	0	0	0	0	1	1
Hunt	1	0	1	0	0	0
Lamar	0	0	0	0	0	1
Leon	1	0	1	0	1	1
Limestone	0	0	0	0	1	1
Madison	2	0	2	0	0	1
McLennan	0	0	0	0	0	2
Navarro	0	0	0	0	2	1
Rockwell	0	0	0	0	0	1
Rusk	55	2,594	2	0	16	40
Smith	4	220	0	0	1	3
Titus	8	2,538	0	0	0	3
Trinity	1	0	1	0	0	2
Upshur	21	798	1	0	2	14
Ttl. Jan.	201	13,817	16	1	54	139
Ttl. Dec.	293	20,948	15	2	49	162
Difference	92	7,131	1	1	5	23

TEXAS PANHANDLE

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Armstrong	0	0	0	0	0	1
Carson	7	1,698	0	3	1	13
Cottle	1	0	1	0	0	1
Collingsw'th.	1	0	1	0	2	0
Dallam	1	0	1	0	0	0
Deaf Smith	0	0	0	0	0	1
Dickens	1	0	1	0	0	1
Floyd	0	0	0	0	0	1
Gray	28	11,590	0	3	11	35
Hall	0	0	0	0	0	1
Hansford	0	0	0	0	0	1
Hartley	0	0	0	0	0	1
Hutchinson	18	13,187	0	0	11	51
Lamb	0	0	0	0	0	1
Moore	6	656	0	5	0	6
Ochiltree	0	0	0	0	0	1
Potter	0	0	0	0	0	1
Roberts	1	0	1	0	1	1
Sherman	0	0	0	0	0	1
Wheeler	8	110	0	6	4	10
Ttl. Jan.	72	27,241	5	17	30	128
Ttl. Dec.	89	33,608	4	13	28	152
Difference	17	6,367	1	4	2	24

CENTRAL AND NORTH TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Archer	19	722	10	0	9	15
Baylor	1	0	1	0	0	1
Brown	2	0	1	1	0	7
Callahan	10	51	8	0	0	15
Clay	10	1,125	0	0	1	6
Coleman	2	0	2	0	0	4
Comanche	0	0	0	0	0	2
Cooke	12	1,021	4	0	1	8
Denton	2	0	2	0	0	3
Eastland	1	0	1	0	0	9
Erath	2	0	2	0	0	0
Fannin	0	0	0	0	0	1
Foard	1	0	1	0	0	2
Grayson	1	0	1	0	1	2
Haskell	0	0	0	0	0	1
Jack	20	6,930	4	1	4	16
Johnson	0	0	0	0	0	1
McCulloch	1	0	1	0	0	1
Mills	0	0	0	0	0	1
Montague	9	181	2	1	1	6
Palo Pinto	2	0	1	1	1	5
Parker	0	0	0	0	0	1
Shackelford	17	1,098	11	0	1	15
Stephens	0	0	0	0	0	5
Throckm't'n	1	0	1	0	0	4
Wichita	60	46,253	13	0	58	99
Wilbarger	9	1,883	2	0	2	10
Wise	0	0	0	0	0	2
Young	25	6,282	16	0	10	34
Ttl. Jan.	207	65,546	84	4	89	276
Ttl. Dec.	173	30,892	71	2	85	242
Difference	34	34,654	13	2	4	34

SOUTHWEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Agua Dulce	1	0	0	1	3	2
Alta Mesa	2	15	1	0	0	2
Alta Verde	0	0	0	0	0	3
Alworth	3	5	0	2	1	0
Amagosa	1	0	0	1	0	0
Batesville	1	0	1	0	0	0
Branyon	1	200	0	0	1	1
Buchanan	1	10	0	0	0	2
Burdette Wells	2	105	0	0	0	4
Burnell-South	3	447	0	0	1	3
Calliham	1	5	0	0	0	1
Chittim	1	30	0	0	0	1
Clara Driscoll	0	0	0	0	1	0
Cole	1	0	1	0	0	0
Colmena	1	12	0	0	0	0
Comitas	1	27	0	0	0	0
Dale	1	0	1	0	0	2
Darst Creek	2	109	0	0	0	3
Dunlap	1	15	0	0	0	2
E. Premont	0	0	0	0	0	1
Escobas	1	10	0	0	0	0
Eckert	0	0	0	0	0	1
Ezzell	8	748	0	0	3	4
Flour Bluff	7	804	1	1	0	2
Fox	1	156	0	0	1	0
Heyser	11	2,499	0	0	2	7
Hoffman	4	88	0	1	0	2
Hughes	1	0	1	0	1	0
Jacob	1	6	0	0	0	0
Keeran	1	0	0	1	0	0
Killam	7	559	1	1	1	2
Kingsville	0	0	0	0	0	2
Labbe	2	0	0	2	0	1
LaBlanca	1	90	0	0	0	0
Las Animas	3	99	1	1	0	0
Loma Alta	0	0	0	0	0	1
Loma Novia	1	0	1	0	0	0
Loma Valdez	1	0	0	1	0	0
Lost Mule	1	0	1	0	0	0
Luby	5	781	0	0	1	3
Luling	10	2,700	0	0	2	4
Lundell	0	0	0	0	0	1
McCampbell	8	1,383	0	0	3	7
McFaddin	1	92	0	0	2	2
Normanna	1	0	1	0	0	0
No. Pettus	1	40	0	0	0	0
No. Sweden	17	2,313	1	2	4	8
O'Hern	1	0	1	0	0	0
Oilton	11	1,259	3	0	4	6
Palangana	0	0	0	0	0	1
Pearsall	2	126	0	1	0	0
Peters	0	0	0	0	0	1
Piedra Lumbre	3	388	1	0	0	1
Placedo	1	135	0	0	1	1
Plummer	0	0	0	0	0	1
Plymouth	4	468	1	0	0	2
Refugio	3	653	2	0	0	4
Rhodes	2	0	0	2	0	1
Richard King	0	0	0	0	0	1
Salt Flat	1	60	0	0	0	3
Sam Fordyce	1	0	1	0	0	2
Sarco Creek	1	34	0	0	0	0
Sarnosa	0	0	0	0	0	1
Saxet	9	675	0	1	7	4
Seven Sisters	3	93	1	0	0	2
South Clara Driscoll	0	0	0	0	1	0
Stratton	1	90	0	0	1	0
Sweden	1	0	0	1	0	1
Taft	1	359	0	0	0	1
Tomoconnor	8	6,507	0	0	3	4
Von Ormy	1	3	0	0	0	0
West Saxet	1	360	0	0	0	4
Zoboroski	0	0	0	0	1	0
Miscellaneous	33	0	33	0	8	62
Total Jan.	206	24,558	55	19	53	177
Total Dec.	156	12,489	41	7	43	180
Difference	50	12,069	14	12	10	3

TEXAS GULF COAST

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Amelia	2	984	0	0	1	4
Anahuac	8	4,261	0	1	0	3
Batson	1	442	0	0	0	0
Bay City	1	164	0	0	0	2
Barbers Hill	0	0	0	0	0	3
Big Hill	0	0	0	0	0	1
Boling	1	105	0	0	0	0
Buckeye	0	0	0	0	0	1
Clam Lake	1	600	0	0	0	0
Clay Creek	1	0	1	0	0	0
Cedar Bayou	1	27	0	0	0	0
Clinton	2	32	0	1	0	0
Cleveland	1	24	0	0	0	1
Cotton Lake	1	129	0	0	0	0
Danbury	1	230	0	0	0	2
Dickinson	6	2,320	0	0	2	6
Esperson	1	68	0	0	0	1
Fairbanks	1	675	0	0	0	1
Fannett	0	0	0	0	0	1
Five Corners	1	151	0	0	0	1
Friendswood	7	4,007	0	0	1	3
Garwood	0	0	0	0	0	1
Hardin	6	2,412	1	0	1	7
Hastings	24	13,306	1	0	3	10
High Island	1	270	0	0	1	1
Hitchcock	1	0	1	0	1	0
Hull	0	0	0	0	0	2
Katy	1	0	0	1	0	0
Labelle	0	0	0	0	1	0
Livingston	0	0	0	0	1	0
Louise	0	0	0	0	0	1
Lockridge	3	433	1	0	0	3
Magnet	3	230	0	0	0	1
Manvel	1	385	0	0	1	1
Markham	1	0	1	0	0	0
Nome	3	508	1	1	0	2
North Cheek	0	0	0	0	0	1
Old Ocean	2	805	0	0	0	2
Orchard	1	0	1	0	0	2
Orange	0	0	0	0	0	5
Palacios	1	350	0	0	0	1
Pickett Ridge	1	87	0	0	0	1
Pierce Junction	1	384	0	0	0	0
Sandy Point	0	0	0	0	1	0
Saratoga	1	0	1	0	0	0
Silsbee	3	1,635	0	0	1	1
Satsuma	1	80	0	0	0	1
Seabreeze	1	116	0	0	0	2
Segno	3	417	1	0	0	2
South Call	0	0	0	0	0	1
Spindletop	2	937	0	0	0	2
Spurger	1	612	0	0	0	1
Thompson	1	432	0	0	1	1
Tomball	8	3,714	0	0	0	4
Turtle Bay	1	584	0	0	0	2
Van Vleck	0	0	0	0	0	2
W. Columbia	1	642	0	0	0	4
Withers	2	589	0	0	0	2
Miscellaneous	9	0	9	0	3	11
Ttl. Jan.	121	43,147	19	4	19	107
Ttl. Dec.	135	49,652	27	2	33	130
Difference	14	6,505	8	2	14	23

LOUISIANA GULF COAST

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Anse La Butte	1	0	1	0	0	0
Bayou Blue	0	0	0	0	0	1
Bay St. Elaine	1	0	1	0	0	1
Bayou Cocotriz	1	904	0	0	0	1
Bayou Des Allemands	0	0	0	0	0	1
Big Lake	0	0	0	0	0	3
Black Bayou	1	434	0	0	0	1
Bosco	0	0	0	0	0	1
Caillou Island	0	0	0	0	0	1
Cameron Meadows	2	650	0	0	1	0
Charenton	5	340	3	0	0	3
Cheneyville	0	0	0	0	0	1
Choctaw	0	0	0	0	0	2
Darrow	0	0	0	0	0	1
Dog Lake	1	0	1	0	0	1
Edgerly	0	0	0	0	0	1
Four Isle	0	0	0	0	0	1
Gillis	0	0	0	0	0	2
Garden Island	1	1,492	0	0	0	1

Hackberry	2	0	2	0	3	2
Horseshoe Bayou	0	0	0	0	0	1
Iowa	1	112	0	0	0	0
Jeanerette	0	0	0	0	0	2
Jennings	5	2,666	0	0	5	10
Lafitte	1	1,769	0	0	0	3
Lake Hermitage	0	0	0	0	0	1
Lake Long	0	0	0	0	0	1
Lake Pelto	0	0	0	0	0	1
Lirette	0	0	0	0	0	1
Lockport	1	0	1	0	0	0
No. Crowley	2	840	0	0	1	2
New Iberia	3	312	2	0	1	4
Potash	9	0	9	0	0	2
Quarantine Bay	0	0	0	0	1	0
Raceland	1	720	0	0	0	0
Roanoke	1	480	0	0	0	1
South Elton	0	0	0	0	0	1
So. Jennings	1	51	0	0	0	0
Sorrento	0	0	0	0	0	1
Starks	1	126	0	0	0	2
Sulphur	1	208	0	0	0	3
Tepetate	1	222	0	0	0	1
Timbalier Bay	1	304	0	0	0	0
Valentine	0	0	0	0	1	2
Venice	0	0	0	0	1	1
Villa Platte	0	0	0	0	0	2
Vinton	1	0	1	0	0	2
Wax Lake	1	350	0	0	0	0
White Castle	2	332	1	0	0	1
Miscellaneous	10	0	10	0	8	11
Total Jan.	58	12,312	32	0	22	81
Total Dec.	32	8,367	14	1	5	99
Difference	26	3,945	18	1	17	18

NORTH LOUISIANA

Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Bienville	0	0	0	0	0	1
Bossier	2	230	0	1	2	0
Caddo-Rodessa	10	4,590	0	1	1	7
Caddo-other	14	240	3	0	4	10
Caldwell	0	0	0	0	0	1
Catahoula	0	0	0	0	1	0
Claiborne	11	12,050	1	0	2	9
Concordia	0	0	0	0	0	1
De Soto	2	200	0	0	2	6
Franklin	0	0	0	0	0	1
LaSalle	2	240	0	0	0	2
Lincoln	5	5,880	1	0	1	6
Morehouse	0	0	0	0	1	3
Ouachita	0	0	0	0	2	2
Red River	1	0	1	0	0	3
Sabine	3	145	1	0	1	1
Tensas	0	0	0	0	0	1
Union	2	0	0	2	3	4
Webster	7	5,255	0	5	3	14
Winn	0	0	0	0	0	1
Total Jan.	59	28,830	7	9	23	73
Total Dec.	57	14,245	14	13	24	72
Difference	2	14,585	7	4	1	1

Gas production: Bossier 40,000,000 feet; Caddo-Rodessa 1,000,000 feet; Union 6,000,000 feet; Webster 31,000,000 feet.

ARKANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Calhoun	0	0	0	0	1	0
Columbia	0	0	0	0	1	2
Crittendon	0	0	0	0	1	1
Dallas	1	0	1	0	0	0
Hempstead	0	0	0	0	2	0
LaFayette	0	0	0	0	0	1
Lincoln	0	0	0	0	1	0
Little River	0	0	0	0	2	0
Lonoke	0	0	0	0	2	0
Miller-Rodessa	10	4,645	0	1	4	6
Nevada	2	60	0	0	1	1
Ouachita	1	10	0	0	1	1
Pulaski	0	0	0	0	0	1
Saline	1	0	1	0	0	0
Union	7	11,325	0	0	3	18
Total Jan.	22	16,040	2	1	19	31
Total Dec.	17	14,590	3	0	16	29
Difference	5	1,450	1	1	3	2

Miller-Rodessa gas production 25,000,000 cubic feet.

EAST TEXAS BORDER

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Bowie	0	0	0	0	1	1
Cass-Rodessa	1	180	0	0	1	1
Cass-other	1	0	1	0	0	0
Harrison	0	0	0	0	1	1
Marion-Rodessa	5	2,015	0	0	0	11
Panola	2	0	1	1	3	1
Shelby	0	0	0	0	2	0
Total Jan.	9	2,195	2	1	8	15
Total Dec.	13	4,175	1	0	10	12
Difference	4	1,980	1	1	2	3

Gas production Panola County 6,500,000 cubic feet.

MISSISSIPPI

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Calhoun	1	0	1	0	0	0
Claiborne	0	0	0	0	2	0
George	0	0	0	0	1	0
Harrison	0	0	0	0	0	1
Hancock	0	0	0	0	1	0
Hinds	1	0	1	0	1	1
Lamar	0	0	0	0	0	2
Perry	0	0	0	0	0	1
Simpson	0	0	0	0	0	1
Wilkenson	1	0	1	0	0	0
Yalobusha	0	0	0	0	1	0
Total Jan.	3	0	3	0	6	6
Total Dec.	4	0	4	0	10	7
Difference	1	0	1	0	4	1

ALABAMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Houston	0	0	0	0	1	0
Mobile	0	0	0	0	1	0
Total Jan.	0	0	0	0	2	0
Total Dec.	0	0	0	0	1	1
Difference	0	0	0	0	1	1

FLORIDA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Lake	0	0	0	0	0	1
Nassau	0	0	0	0	1	0
Total Jan.	0	0	0	0	1	1
Total Dec.	1	0	1	0	1	1
Difference	1	0	1	0	0	0

ROCKY MOUNTAIN FIELDS

New Mexico

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Bernalillo	0	0	0	0	0	1
McKinley	0	0	0	0	0	6
San Juan	4	47	1	0	0	1
San Miguel	0	0	0	0	0	3
Socorro	0	0	0	0	0	1
Torrance	0	0	0	0	0	1
Valencia	0	0	0	0	0	3
Lea	32	13,635	2	1	6	88
Eddy	5	740	1	0	1	31
Chaves	0	0	0	0	0	3
Curry	0	0	0	0	0	1
DeBaca	0	0	0	0	0	3
Dona Ana	0	0	0	0	0	1
Roosevelt	0	0	0	0	0	1
Otero	0	0	0	0	0	3
Total Jan.	41	14,422	4	1	7	147
Total Dec.	52	29,340	1	2	10	150
Difference	11	14,918	3	1	3	3

Colorado

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Adams	0	0	0	0	0	2
Archuleta	0	0	0	0	0	5
Boulder	0	0	0	0	0	1
Cheyenne	0	0	0	0	0	1
Huerfano	0	0	0	0	0	2
La Plata	0	0	0	0	0	2
Mesa	0	0	0	0	0	2
Moffat	0	0	0	0	0	1
Park	0	0	0	0	0	3
Rio Blanco	0	0	0	0	0	2
Routt	0	0	0	0	1	1
Miscellaneous	0	0	0	0	0	8
Total Jan.	0	0	0	0	1	30
Total Dec.	4	0	4	0	0	34
Difference	4	0	4	0	1	4

Wyoming

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Albany	0	0	0	0	0	2
Big Horn	0	0	0	0	0	4
Carbon	3	80	1	1	1	6
Converse	1	0	0	1	2	10
Fremont	0	0	0	0	0	6
Hot Springs	1	100	0	0	0	4
Lincoln	0	0	0	0	0	4
Natrona	0	0	0	0	0	6
Niobrara	4	3,222	0	0	3	7
Park	1	0	0	1	0	4
Sweetwater	1	0	0	1	0	9
Uinta	0	0	0	0	0	3
Weston	1	20	0	0	1	8
Miscellaneous	0	0	0	0	0	3
Total Jan.	12	3,422	1	4	7	76
Total Dec.	12	1,732	4	1	6	81
Difference	0	1,690	3	3	1	5

Montana

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Big Horn	0	0	0	0	0	2
Carbon	0	0	0	0	0	5
Fergus	0	0	0	0	0	6
Glacier	1	0	1	0	0	2
Hill	1	0	1	0	1	0
Petroleum	0	0	0	0	0	2
Pondera	0	0	0	0	1	1
Toole	1	150	0	0	0	13
Yellowstone	0	0	0	0	0	3
Miscellaneous	0	0	0	0	0	10
Total Jan.	3	150	2	0	2	44
Total Dec.	7	234	3	0	1	45
Difference	4	84	1	0	1	1

Utah

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Total Jan.	0	0	0	0	1	7
Total Dec.	0	0	0	0	1	7
Difference	0	0	0	0	0	0

NEBRASKA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Total Jan.	0	0	0	0	0	6
Total Dec.	1	0	1	0	0	6
Difference	1	0	1	0	0	0

EASTERN FIELDS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Bradford	*151	155	0	0	7	66
Allegany	†50	28	0	0	3	37
Middle Dist.	‡16	16	1	0	1	10
Butler-Armstrong	4	15	0	1	9	3
N.Y.-Pa. gas	9	0	1	8	4	13
S.W. Pa.	19	9	12	5	5	33
S.E. Ohio	40	518	16	7	9	39
West Va.	76	43	12	54	26	132
Ttl. Jan.	365	784	42	75	64	333
Ttl. Dec.	428	1,658	40	103	76	375
Difference	63	874	2	28	12	42

Note—(*) and (†) include water pressure wells; (‡) includes air and gas pressure wells.

MICHIGAN

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Adams	1	96	0	0	0	2
Bentley	0	0	0	0	1	7
Broomfield	0	0	0	0	0	2
Buckeye, N.	19	7,141	1	2	2	12
Buckeye, S.	13	3,616	0	0	1	7
Clayton	1	25	0	0	2	6
Crystal	0	0	0	0	0	1
Deerfield	0	0	0	0	0	1
New Haven	0	0	0	0	1	0
Porter-Yost	1	41	0	0	0	2
Salem	5	2,275	0	0	2	8
Secord	1	0	1	0	0	1
Sherman	1	214	0	0	1	6
Trowbridge	0	0	0	0	0	1
W. Branch	5	347	0	0	3	10
Winfield	0	0	0	0	1	0
Wildcats	22	175	20	0	10	67
Ttl. Jan.	69	13,930	22	2	24	133
Ttl. Dec.	61	12,501	16	2	41	152
Difference	8	1,429	6	0	17	19

ILLINOIS

Summary of Field Operations

County:	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Bond	0	0	0	0	0	3
Bureau	0	0	0	0	0	1
Clark	0	0	0	0	0	1
Clay	6	998	0	0	3	4
Clinton	3	386	0	0	4	11
Coles	0	0	0	0	0	4
Cumberl'd	0	0	0	0	1	1
DeKalb	0	0	0	0	0	2
Dewitt	0	0	0	0	0	1
Edwards	0	0	0	0	0	2
Effingham	0	0	0	0	1	2
Fayette	1	70	0	0	1	5
Franklin	0	0	0	0	0	2
Greene	0	0	0	0	0	1
Hamilton	0	0	0	0	0	1
Hardin	0	0	0	0	0	1
Iroquois	0	0	0	0	0	1
Jasper	1	0	1	0	0	1
Jefferson	2	70	1	0	3	3
Madison	0	0	0	0	0	1
Marion	2	46	1	0	3	15
Massac	0	0	0	0	0	1
Montgomery	0	0	0	0	0	1
Pope	0	0	0	0	0	1
Randolph	0	0	0	0	0	2
Richland	17	4,961	2	0	11	28
Rock Island	0	0	0	0	0	1
Saline	0	0	0	0	0	2
Shelby	0	0	0	0	0	1
Vermilion	0	0	0	0	0	1
Wabash	2	0	2	0	0	1
Washington	0	0	0	0	0	2
Wayne	1	408	0	0	1	4
White	0	0	0	0	0	1
Will	0	0	0	0	0	1
Williamson	0	0	0	0	1	0
Ttl. Jan.	35	6,939	7	0	29	110
Ttl. Dec.	78	11,881	33	0	22	94
Difference	43	4,942	26	0	7	16

INDIANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Crawford	0	0	0	0	0	1
Daviess	1	0	1	0	0	2
Dearborn	0	0	0	0	0	1
Gibson	1	0	1	0	0	2
Hancock	0	0	0	0	0	2
Harrison	0	0	0	0	0	1
Huntington	0	0	0	0	0	1
Jay	0	0	0	0	0	1
Jennings	0	0	0	0	0	1
Knox	1	0	1	0	0	1
LaGrange	0	0	0	0	0	2
Perry	2	0	2	0	0	2
Pike	0	0	0	0	0	5
Porter	0	0	0	0	0	1
Posey	0	0	0	0	0	2
Rush	0	0	0	0	0	1
Spencer	0	0	0	0	0	1
Sullivan	0	0	0	0	0	6
Vigo	0	0	0	0	0	1
Wabash	0	0	0	0	0	1
Total Jan.	5	0	5	0	0	35
Total Dec.	6	5	2	3	0	39
Difference	1	0	3	3	0	4

Gas wells completed—0.

WESTERN KENTUCKY

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Breck'nridge	3	0	2	1	0	3
Caldwell	0	0	0	0	0	1
Daviess	4	60	1	2	0	5
Grayson	1	0	1	0	0	1
Hancock	11	52	4	2	0	3
Henders'n	2	50	1	0	0	2
McLean	7	214	2	0	0	5
Muhlenb'rg	0	0	0	0	0	3
Ohio	17	163	5	3	0	13
Union	1	0	1	0	0	0
Webster	2	0	1	1	0	1
Total Jan.	48	539	18	9	0	37
Total Dec.	34	352	15	6	0	40
Difference	14	187	3	3	0	3

EASTERN KENTUCKY

Summary of Field Operations

County:	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Lawrence	1	3	0	0	0	1
Magoffin	0	0	0	0	0	2
Powell	6	29	1	0	0	5
Lee	10	206	2	0	1	4
Martin	0	0	0	0	0	5
Floyd	3	10	0	2	0	6
Knott	0	0	0	1	0	2
Pike	0	0	0	0	0	3
Ttl. Jan.	20	248	3	3	1	28
Ttl. Dec.	33	230	3	19	8	36
Difference	13	18	0	16	7	8

CENTRAL OHIO

Summary of Field Operations

County:	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Ashland	2	0	0	2	0	3
Ashtabula	2	0	1	1	0	0
Athens	2	0	1	1	3	6
Belmont	1	0	0	1	2	2
Coshocton	0	0	0	0	0	1
Cuyahoga	1	0	0	1	1	2
Fairfield	0	0	0	0	0	3
Gallia	0	0	0	0	0	1
Guernsey	2	0	0	2	2	5
Hocking	1	0	0	1	1	1
Holmes	0	0	0	0	1	0
Huron	0	0	0	0	0	2
Knox	4	153	0	2	3	8
Lawrence	0	0	0	0	1	1
Licking	8	178	2	3	4	7
Lorain	2	0	1	1	1	2
Medina	2	5	1	0	0	0
Meigs	6	0	4	2	1	3
Monroe	3	2	0	2	0	7
Morgan	1	4	0	0	1	3
Muskingum	4	50	1	1	0	6
Noble	3	0	0	3	3	2
Perry	3	7	0	2	2	2
Richland	0	0	0	0	0	1
Stark	2	0	0	2	2	7
Summit	2	0	0	2	0	2
Tuscarawas	2	0	1	1	1	6
Vinton	0	0	0	0	0	1
Washington	7	13	1	3	2	15
Wayne	1	0	0	1	0	0
Ttl. Jan.	61	412	13	34	31	99
Ttl. Dec.	107	485	36	33	40	121
Difference	46	73	23	1	9	22

LIMA FIELD

Summary of Field Operations

County:	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.
Greene	0	0	0	0	0	1
Putnam	1	20	0	0	2	0
Sandusky	0	0	0	0	0	1
Seneca	0	0	0	0	0	2
Wood	1	0	0	1	0	1
Ttl. Jan.	2	20	0	1	2	5
Ttl. Dec.	5	107	1	0	1	2
Difference	3	87	1	1	1	3

Texas Wildcats

(Continued from Page 117)

lines of sec. 371, H.&T.C. Sur., Blk. 2. Prep. run 12½-in. at 1,935 ft.

F. B. Parriott No. 1 H. T. Carlile, 330 ft. from S line, 990 ft. from E line, SW¼ NE¼ sec. 293, Blk. D, H.&T.C. Sur., rotary to 5,500 ft., 6 mi. NW of Swenson. Spd.

Taylor County

Dr. W. C. Braham et al No. 1 Ernest Armstrong, 3½ mi. E of Abilene, 220 ft. from S line and 330 ft. from W line of NE¼ SE¼ sec. 40, B.A.L. Sur. S.D. 800 ft.

Bert Fields et al No. 1 Sears, sec. 223, Blk. 64, H.&T.C. Sur. S.D. 1,530 ft.

A. Findley No. 1 Bowles Est., NE cor. county, sec. 26, B.A.L. Sur. Tstg. 1,873-80 ft.

Throckmorton County

Humble O. & R. Co. No. 1-A Reynolds Cattle Co., 330 ft. from S and E lines, sec. 7-2, A.B.&M. Sur. Drlg. 2,200 ft.

Morris & Spoonts No. 1 Alden Bros., NW cor county, 1,350 ft. from E line and 5,210 ft. from S line of Raymond Sanches Sur. A-248. Drlg. 750 ft.

Henry Zweifel No. 1 J. H. Lee, 4 mi. NE of Woodson, 930 ft. from E line and 2,011 ft. from S line of J. A. George Sur. T.D. 865 ft.; S.D.

Wise County

Latex Oil Co. No. 1 Smith, 3 mi. E of Bridgeport, Jas. Couch Sur. T.D. 4,075 ft.; P.B. to 3,910 ft.; S.D.; W.O.

PERSONAL

H. I. CARO, managing director of R. G. Lane, Ltd., and J. CHILLMAN, recently appointed a director of that London oil importing firm, arrived in the United States last week. The same organization exports from the Texas Gulf Coast.

EDWARD L. SHEA, executive vice president, and other officials of Tide Water Associated Oil Company, New York, have completed an inspection trip of the company's producing properties in Coastal Louisiana. Included in the party were E. H. SALRIN and R. B. PRINGLE, vice presidents; R. T. LYONS, assistant vice president in charge of the land and geological departments; D. E. LOGAN, production superintendent; T. A. HALL and GEORGE L. NYE, engineers, and T. G. KELLIHER, land man.

CLIFF BAKER, president; BURNETT WOLFSON, vice president, and S. R. COLEMAN, secretary-treasurer, of Vanguard Oil Company, were reelected at the annual meeting held in Los Angeles. S. B. BRENNECKE and T. W. HAWTHORNE were elected directors.

W. S. S. RODGERS, New York, president of the Texas Company; C. E. OLMSTEAD, Los Angeles, president and general manager of the Texas Company (California); T. J. DONOGHUE, executive vice president; L. E. BARROWS, general manager of the producing department; J. A. BERMINGHAM, manager of the producing department, South Texas division, and J. S. LEACH, Houston, manager of the sales department, southern territory, inspected properties in Southwest Texas recently.

N. H. DARTON, of the U. S. Geological Survey, Washington, D. C., was honor guest at the Monday luncheon of the Dallas, Tex., Petroleum Geologists Club in the Baker Hotel. Mr. Darton was in Dallas visiting DR. ROBERT T. HILL, geologist and historian, with whom he worked for many years when the latter was associated with the survey.

JOHN R. SUMAN, vice president of the Humble Oil & Refining Company; DR. L. W. BLAU, head of the company's geophysical research department; GEORGE B. CORLESS, division superintendent for Humble; M. M. ALBERTSON, petroleum engineer for the Shell Petroleum Corporation; M. T. HALBOUTY, vice president of the Merit Oil Corporation; C. A. WARNER, head of the land department and assistant to the president of the Houston Oil Company, and BASIL ZAVOICE, consulting petroleum engineer, are among the Houston, Tex., delegation attending the meeting of the American Institute of Mining and Metallurgical Engineers in New York this week.

ARTHUR B. LAWRENCE, director of the Continental Oil Company, left last week for a trip to Europe.

E. HOLMAN, president of several Standard Oil Company of New Jersey foreign subsidiaries, sailed from New York last week for a business trip to Venezuela.

A. M. BLOW, vice president of the Amerada Petroleum Corporation with headquarters in Tulsa, made a tour of inspection through the Coastal Louisiana district the past week.

D. P. HAYES, petroleum engineer for the South Texas division of the Texas Company in Houston, has been appointed chief petroleum engineer. He succeeds W. V. VIETTI who recently was transferred to South America.

CHARLES COLVIN has been made drilling superintendent of the newly organized Federal Drilling Company of California. The company, organized by the Bass and Goodnight interests, is rigging up to drill a wildcat on a lease north of the Ring area in the San Joaquin Valley.

GEORGE L. RUDDLE has been made traffic manager of the Indian Territory Illuminating Oil Company, Bartlesville, Okla., succeeding H. C. DUNCAN, who resigned several months ago. Mr. Ruddle formerly was in the Tulsa freight office of the Missouri-Kansas-Texas Railway.

R. P. McLAUGHLIN, former state oil and gas supervisor and at present manager of the Dominguez Oil Field Company, was named California delegate to the annual meeting of the American Institute of Mining and Metallurgical Engineers and he left Los Angeles for New York accompanied by HARVEY MUDD, a director of the institute.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The Public Buildings Bill introduced in congress includes an item of $2,500,000 for a new building to house the United States Geological Survey.

M. B. Sweeney has been made general manager of the Sun Oil Company in Texas and Louisiana, succeeding J. Edgar Pew, resigned. G. A. Tucker succeeds Mr. Sweeney as superintendent of production.

John E. Dusenberry, 76, oil producer, banker and manufacturer, dies at his home in Portville, a suburb of Olean, N. Y.

20 YEARS AGO

Outside of the Gulf Coastal district Texas produces 30,000 barrels of oil per day, all in northern counties.

The story is told in Kansas that after the location for Gypsy Oil Company No. 5 Shumway, in the Towanda pool, Butler County, was staked, a teamster drove over the stake, and in replacing it, stuck it into the ground in the wrong spot. The well drilled into a crevice which has yielded $4,000,000 worth of oil.

R. A. Griffith is made vice president and manager of production for Sinclair Oil & Gas Company.

The Prairie Pipe Line Company will extend its main line system from Cushing, Okla., to the Ranger district in Texas, 300 miles distant.

10 YEARS AGO

J. H. Greer, 51, general superintendent of production for Pure Oil Company, dies in Tulsa.

Walter S. Hoyt, president of the Hoyt Oil Company, and formerly an extensive natural gas operator, dies in Kansas City, Mo.

Noah F. Clark, 73, of Pittsburgh, Pa., who organized the South Penn Oil Company, and was its first president and general manager, passes away in Rochester, Minn. He was president of the Omar Oil Company at the time of his death.

GEORGE H. GAGE, division manager of the Signal Oil Company in Portland, Ore., is in Los Angeles on business.

E. H. MOORE, president of E. H. Moore, Inc., Tulsa, was in New York last week conferring with financial interests.

J. D. CREVELING, president of the Panhandle Eastern Pipe Line Company, said on his return to New York from Europe last week he expects the natural gas business in this country to surpass the record of 1937.

J. O. WOODBURN, production superintendent for the Gulf Refining Company in the Caddo district, North Louisiana, is recovering from a serious operation on his eyes in Dallas, Tex. He will return soon to his home in Mooringsport, La.

T. A. MANHART, chief supervisor and assistant vice president of the Seismograph Service Corporation, Tulsa, sailed from New York on the Bremen last Saturday for London to consult with clients there. His trip may be extended from that point.

RAYMOND B. KELLY, manager of the Texas producing division, Pure Oil Company, in Fort Worth, Tex., has been appointed chairman of the committee on entertainment and arrangements for the annual southwestern production meeting of A.P.I. in Fort Worth on March 25 and 26.

EVERETT R. FILLEY, manager of the Oklahoma-Kansas division of the Texas Company, has been made assistant manager of the production department of the Texas Company of Delaware, with headquarters in Houston, Tex. He will assume his new post March 1. HAROLD N. PARDEE, formerly Mr. Filley's assistant, succeeds him as division manager.

PARAGRAPHS

SAMUEL BUTLER, president of the Arab Gasoline Corporation, and MRS. BUDA A. CONNELLEE, both of Eastland, Tex., were married recently in that city. Following the ceremony they left for Shawnee, Okla., to meet Mr. Butler's brother, GEN. SMEDLEY BUTLER.

W. C. KNEALE, district geologist for the Texas Company in Mattoon, Ill., has been promoted to production superintendent of the Illinois-Indiana district with headquarters in Mount Vernon, Ill. B. MAXWELL MILLER, a geologist in the Mattoon office, has been made district geologist with headquarters in Mattoon.

RONALD K. DeFORD, geologist of Midland, Tex., guest speaker at a special meeting of the Houston Geological Society February 10, said oil resources of Russia have barely been touched. "Only the most obvious structures have been drilled," said Mr. DeFord, giving a report on the International Geological Congress in Moscow.

H. A. EKLUND, formerly with Boone Brothers Oil Company, Houston, Tex., has been placed in charge of the land and leasing division of the British American Oil Producing Company, Tulsa, W. K. WHITEFORD, vice president and general manager, announced. The company has opened a land and geological office in Wichita, Kans., with FRED OGLESBY as land man and FRANK WEIMER as district geologist. A similar district office has been opened in Midland, Tex., with FERN FUSION as land man and RICHARD GILES as geologist. The company and its sister organization, the Toronto Pipe Line Company, both subsidiaries of the British American Oil Company, Ltd., are to move into new offices in the Philtower Building March 1. J. C. MILLAR, Toronto, Canada, treasurer of the parent company, spent last week in Tulsa.

HECTOR FRATELLI, superintendent of the A.N.C.A.P. refinery in Montevideo, Uruguay, sailed for that city from New York February 12. He had been in the United States several months. Mr. Fratelli said the refinery, in operation more than a year, has performed exceptionally well.

C. HALL MONTGOMERY, geologist for the Continental Oil Company in Bakersfield, Calif., addressed the evening class in petroleum technology at the Bakersfield Junior College last Thursday on the Wasco wildcat, world's deepest test which is now being drilled below 13,000 feet by the Continental Oil Company in the San Joaquin Valley. Mr. Montgomery has been in charge of the geological work. The class in petroleum technology was organized several months ago.

CLYDE M. BECKER, widely known geologist who has been ill in his home in Chickasha, Okla., for several weeks, was reported improving.

CARL HAM, safety engineer for the Humble Oil & Refining Company in Midland, Tex., for the past two years, has been transferred to Wink, Tex., as farm boss in the production department.

M. W. SHEPPARD, formerly of the land department of the Shell Oil Company, Los Angeles, Calif., has been put in charge of a new land office opened by his company in the Haberfelde Building, Bakersfield.

LEWELL ADAIR, petroleum engineer with the Atlantic Refining Company, has been transferred from Great Bend, Kans., to Scott City, where he will work in the Shallow Water oil pool, operated exclusively by the Atlantic.

JOHN W. NEWTON, recently appointed general manager of refineries for the Magnolia Petroleum Company, Beaumont, Tex., was honor guest at a banquet given by the Beaumont A. and M. College Club, of which he is a member.

A. O. PEGG, superintending marine engineer of the Union Oil Company, left Los Angeles a few days ago for Baltimore to superintend construction of Union's new tanker at the Bethlehem Steel Corporation's Sparrows Point plant.

H. S. COLE, JR., former general superintendent of the production, drilling, and gasoline division of the Texas Company of California, has been named assistant division manager of the West Texas district for the Texas Company, effective March 1. His headquarters will be in Fort Worth, Tex.

When Boy and Job Met

The Standard Oil Company of California needed an office boy and G. E. Kennedy, 16, needed a job. Boy and job met. The customary preliminaries concerning references and so on having been disposed of, young Kennedy's name soon adorned the payroll of the company's main office in San Francisco. The salary was nothing to brag about, but promotion came before long, for there is a tradition that he laid less mail on the wrong desks, missent fewer packages, and spilled less ink than any other office boy in the history of the company. This was back in 1899. From office work the young man was transferred to the sales department, and he served in various districts. In 1907 he was assigned to the Oakland territory, and four years later he was moved to Fresno. In 1920 he was made district sales manager in that city.

G. E. KENNEDY

The next year Mr. Kennedy became district sales manager in San Francisco. Subsequently he served four years in a similar capacity in Seattle, Wash. In 1926 he was transferred to the home office in San Francisco as assistant to the general sales manager. In 1930 he was made general sales manager, and in the same year he was elected to the board of directors. In January of the present year Mr. Kennedy was chosen executive vice president of Standard Stations, Inc., marketing subsidiary.

Mr. Kennedy was born in Chicago in 1883. Shortly afterwards the family moved to California, and the boy was educated in the schools of Oakland and San Francisco.

HAL JOHNSON, president of the Major Products Petroleum Company of Chicago, is spending a vacation in Los Angeles.

A. B. GOSS, who was district geologist for the Mid-Continent Petroleum Corporation in Midland, Tex., has been shifted to a similar post in San Antonio.

R. S. MONCRIEF, of Shreveport, La., was elected president of the newly organized Petroleum Retailers Association, Inc., formed to promote the interests of local gasoline retailers.

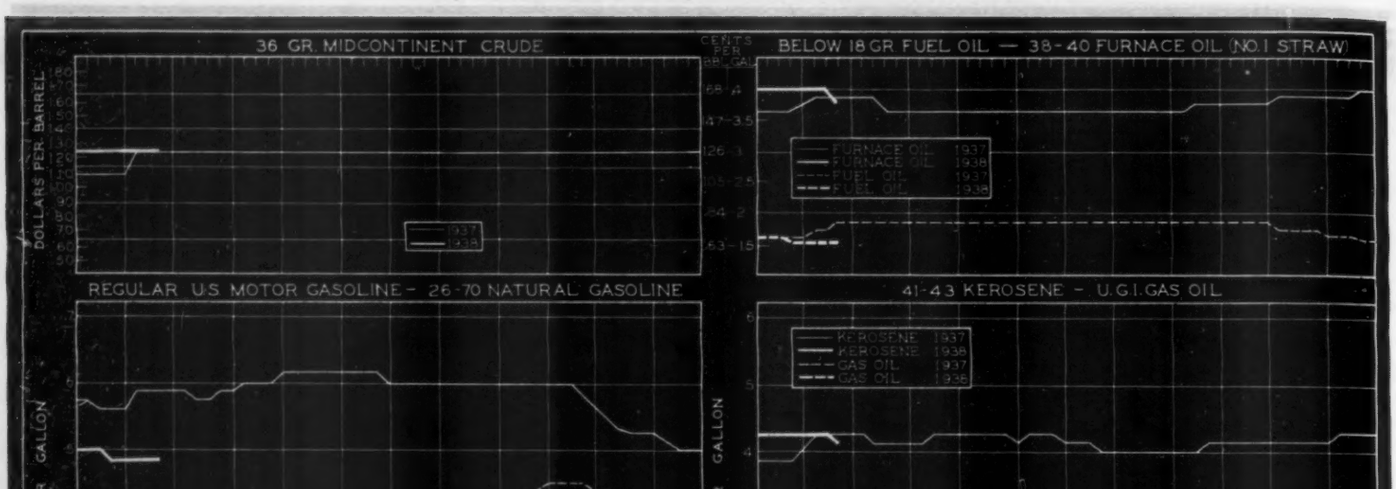
J. M. CLARK, geologist for the Gulf Oil Corporation in Tulsa, has resigned to join the geological department of the Tide Water Associated Oil Company in the same city.

F. O. KOONTZ, of the Quaker State Oil Refining Corporation, Oil City, Pa., caught a 140½-pound tuna while vacationing in Florida. It gave him the lead in the $10,000 Miami tournament.

DR. B. B. WEATHERBY, president of the Geophysical Research Corporation, has replaced WILLIAM M. FLEETWOOD, JR., attorney for the Barnsdall Oil Company, on the board of the Tulsa Public Library.

PEYTON F. GWYNN, of Wichita Falls, Tex., was elected president of the North Texas Oil and Gas Association last week, succeeding R. LEE UNDERWOOD. He will be installed at the annual banquet February 26.

A. W. TRUSTY, chief chemist of the Arkansas Fuel Oil Company in Shreveport, La., presided at the monthly meeting of the Ark-La-Tex division of the Western Petroleum Refiners Association last week. Questions on refinery problems submitted by members were discussed.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Naturals Take High Dive in Group 3 Market, but Gasoline Looking Up

By T. F. SMILEY

Natural gasoline, which began a high dive in the Group 3 market a month ago, crashed against the bottom of the price graph this week with such force that observers expected it to break through. Light fuels, lacking firmness for weeks, were appreciably softer. Gasoline, under the tonic of refinery shutdowns, had a healthier look.

It is necessary to go back to July, 1934, to find the naturals in such a panic-stricken state. In that month the 26-70 grade touched 1¼ cents. It quickly recovered, however. In May, 1933, the same grade slid to 1 cent. The market moved into a better strategic position after that, and there seemed to be a prospect of overcoming the long-standing difficulties presented by seasonal peaks and valleys of demand and supply.

Glancing at 1937

At this time last year 26-70 was within reaching distance of 4 cents. It dropped to 3 cents and then in March began a gradual ascent which continued till September, when it leveled off at 4½ cents. The present debacle occasions no astonishment. For weeks overflowing stocks have been seeking outlets. Dumping was inevitable. Recent filling of a cargo order for export at 1¾ cents is said to have had a particularly weakening effect.

Whimsies of the weatherman were blamed for sickness of the furnace oils. Quotations were crumbling, and it looked as though the process might go further. In February of 1937 buyers of light-gravity distillates were engaged in a mad race, and prices were at their high for the year. Market history was expected to repeat itself, but didn't. Large refiners, as well as small ones, held back their light fuels from the open market in January this year, thinking they would be needed in taking care of contract customers. But mild temperatures slowed up shipping instructions, and inventories did not go down as they would have if an orthodox winter had prevailed.

These refiners now are trying to get rid of overheavy supplies in a spot market already clogged with offerings. Refiners who distribute heating oils from their own bulk stations direct to consumers and jobbers find themselves in the same predicament. Unless old-fashioned freezing weather overspreads wide areas soon the general eagerness to move stocks before it is too late may be expected to cause further congestion of offerings. Kerosene and tractor distillates, though they were off this week, gave signs of holding better from this point.

Indications of further recovery were discernible in the gasoline division. The improvement seemed to be restricted pretty much to the low-octane material, but it was expected to creep up into the higher grades. Several reasons are seen for the better market tone being most clearly visible in the low-octane grade. One is that many of the refineries which closed in recent weeks produced that quality chiefly. Another is that with natural at its current low prices, many jobbers are buying it and blending it with low-octane refinery gasoline. Their efforts to obtain this refinery product in a market already well bought up have helped to create a condition approaching tightness.

Prices Rise in East Texas

Plant shutdowns in East Texas have resulted in such a scarcity of gasoline in that area that refiners still operating advanced their prices for the low-octane grade a quarter-cent last Monday. All in the district were reported to be asking 4½ cents f.o.b. refinery. Inability of East Texas refiners to meet demands of buyers was expected to increase the firmness of the gasoline market throughout the Mid-Continent.

Lubricants and bright stocks, though still slow and subject to under-selling, seemed to be in slightly better position. Wax continued lifeless. Heavy industrial oils were draggy.

Refined Oil Market Barometer

Plant shutdowns and reduced runs are showing results in the Mid-Continent gasoline market. Contraction of inventories in East Texas has caused the few remaining refineries still operating to raise prices. Heating oils which had been held for expected contract needs are now seeking outlets in the spot market with consequent shading of quotations.

MID-CONTINENT. Naturals off sharply. Light fuels easier. Gasoline slightly firmer.

EAST COAST. Gasoline and fuel oils unsettled, with price-shading reported.

GULF COAST. Fuel oils and gasoline weak. General market quiet.

CALIFORNIA. Gasoline soft. Burning oils and diesels weak.

PENNSYLVANIA. Gasoline stocks rising and market weak. Lubricants improving.

CHICAGO. Gasoline offerings less urgent. Heating oils losing ground.

Seasonal Dullness Prevails in Refined Markets of North Atlantic Areas

By H. STANLEY NORMAN

NEW YORK, Feb. 15.—Seasonal dullness took a firm grip on petroleum markets in the north Atlantic territory last week. Mild winter temperatures produced another lag in the fuel oil market and gasoline quotations were unsettled in both the tankcar and service station fields.

The general market suffered no upheavals, but reports of price shading were heard more frequently. The concessions were spread over a broad field, including barge and tank-wagon fuel oil, tankcar and barge motor fuel, and a few instances in the wax market.

The Gulf Coast open crude oil market has touched a new low for the current downward movement. Reports were heard last week that East Texas crude was offered under hatch on the Gulf Coast for 14½ cents per barrel over the field posted price of $1.35 per barrel, whereas, normal charges for gathering, main line movement and loading would require a margin of about 17½ cents. Not many of the big suppliers were actually participating for current spot crude business on the Gulf Coast. Those suppliers in position to do so are showing a preference for waiting until conditions tighten even more as a result of the Sunday shutdowns in Texas and more stringent regulations in some of the other large producing states.

Several Gulf Coast refiners had also withdrawn from the export and spot coastwise products market until prices stiffen, according to reports reaching New York. Since the latter part of December, the spot export market on the Gulf Coast has been unsatisfactory. However, shipping and loading instructions against long term contracts have been reaching regular suppliers without interruption. The last cargo of gasoline sold in the export market was reported placed in the first week of this month. The transaction involved about 60,000 bbls. of 64-66, 375 endpoint gasoline, and the business was placed on a supplier's bid of 5 cents per gallon. March loading is designated, a fact which may have contributed to the price of 5 cents. Belief is prevalent that immediate loading business will command a slightly higher figure.

As in the case of crude suppliers, Gulf Coast refiners are reluctant to bid on current business. Despite the record peak of gasoline stocks which are mounting higher each week, some refiners are still hopeful that the general market can be held at approximately its present levels until spring brings general improvement in consumption.

In New York particularly, January consumption has been affected by inability of thousands of motorists to register their vehicles by the January 31 deadline and consequently they are now out of service. Records of the Motor Vehicle Bureau indicate that several thousand New York cars registered in 1937 are still missing from the license plate renewal list, leaving the impression that owners were financially unable to meet the obligation at the specified time. Despite the fact that new car sales have fallen badly since January 1 this year compared to 1937, the concentration on used-car buyers has produced results, according to indications from incomplete records.

The tankcar market for 65-octane gasoline in this vicinity was reported at the range of 6½ to 7 cents per gallon when the week ended. The bottom of the existing range is a quarter of a cent under the preceding week's low, but only a limited amount of the total business is transacted at the reduced figure. In fact, spot gasoline business in the tankcar market was too slight to be considered important during the past two or three weeks, but movement against contracts has been holding up fairly well.

Refiners on the Gulf Coast and in the northeastern districts came in for sharp criticism from one quarter in the industry last week for failure to curtail runs to stills in line with restrictions imposed on producers. Hope has not been abandoned, however, that voluntary refinery curtailment as a means of retarding the rise of gasoline stocks will figure in the picture before winter ends.

For the past three weeks fuel-oil demand has been disappointing to refiners in this part of the country. In fact, business in fuel oil has at no time reached the heights expected this winter despite the record number of burners in service. The explanation given for dull fuel-oil business is the mild temperatures prevailing so far. Hardly more than 21 days of subfreezing weather has been experienced in the vicinity of New York this winter. Despite the generally unsatisfactory fuel-oil consuming conditions, prices have been reasonably stable. There has been no general change since the quarter-of-a-cent reduction on most grades early in January.

Kerosene is generally quoted at 6 to 6⅛ cents in tankcars in New York and New Jersey, while the light fuel oils are unchanged at 5 cents per gallon. Barge deliveries may be obtained at slight fractions below the tankcar prices quoted. Bunker C fuel oil is still in fair demand in New York at the unchanged price of $1.25 per barrel.

Heavy industrial grades of fuel oil are said in some quarters to be weak and the material has figured in a few transactions at 3¼ cents per gallon, but the bulk of the business is at 3½ to 3¾ cents per gallon.

Bunker C fuel oil on the Gulf Coast is reported available at 80 to 85 cents per barrel. Reports reaching New York last week that business could be done at substantially lower figures appeared to be either in error, or applicable to a relatively small volume which since had been removed from the market.

Considerable interest has been developing in gas oil on the Gulf Coast, but the relatively high boat rates prevailing have discouraged several traders from closing deals. There was evidence at hand late last week that the lack of actual business may act to depress the tanker charter market to the extent that coastwise movement will again become profitable. One boat was reported offered for service on the Gulf Coast for a cargo of fuel oil at 35 cents per barrel, a reduction of 2 cents under the general market. It was not learned if the boat had been taken under contract, but it was thought in trade circles that it would not remain idle long at the price asked.

There is considerable potential coastwise business hanging over the Gulf Coast market. Several north Atlantic distributors have ordered out material on a conservative basis for several weeks since a crisis developed in the crude and products markets. The possibility of a general reduction throughout the market structure has been entirely dispelled, and this psychological barrier to normal trade has figured in conditions almost all winter.

Regular grades of gasoline were

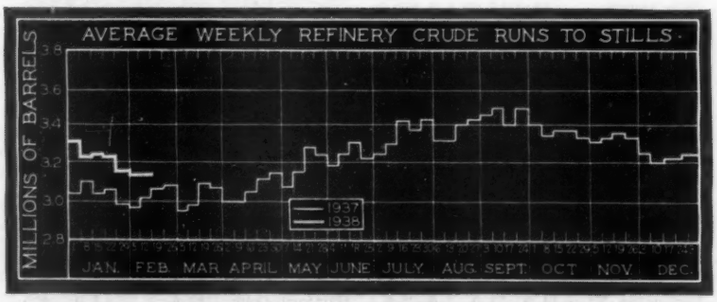
(Continued on Page 124)

A. P. I. Weekly Refinery Statistics

Week Ending February 12, 1938

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	537,000	20,518,000	10,781,000
Appalachian	88.4	111,000	3,488,000	1,255,000
Indiana, Illinois, and Kentucky	92.4	435,000	14,771,000	6,669,000
Oklahoma, Kansas and Missouri	84.7	258,000	7,498,000	3,478,000
Inland Texas	56.6	148,000	2,762,000	1,787,000
Texas Gulf	95.7	690,000	13,362,000	9,708,000
Louisiana Gulf	96.6	113,000	2,401,000	3,360,000
North Louisiana and Arkansas	63.7	38,000	565,000	504,000
Rocky Mountains	69.7	40,000	2,136,000	716,000
California	90.9	499,000	15,342,000	78,295,000
Total reported	89.0	2,869,000	82,843,000	116,553,000
Estimated unreported	.....	281,000	4,970,000	2,740,000
*Estimated total	.....	3,150,000	87,813,000	119,293,000
*Estimated total previous week	.....	3,155,000	86,484,000	118,619,000
*February 13, 1937	.....	3,020,000	73,585,000	100,735,000

*Bureau of Mines, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending January 29, 1938	304,286,000 barrels
Week ending January 22, 1938	304,424,000 barrels
Week ending January 30, 1937	286,817,000 barrels

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of February 15, 1938

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Gasoline Dir.	Gasoline Inc. tax	Kero. tank wag.
Chicago, Ill.	15.3	13 3	4.0	10 2
Decatur	15.3	13 1	4 0	10 2
Joliet	15.3	13 8	4 0	10 2
Peoria	15.3	13 8	4 0	10 2
Quincy	15.1	13 6	4 0	10 0
Davenport, Ia.	15.3	13 8	4 0	‡13 2
Des Moines	15.1	13 6	4 0	‡11 0
Mason City	15 4	13 9	4.0	‡13 3
Sioux City	15.3	13 8	4 0	‡13 2
Duluth, Minn.	17.0	15 5	5 0	10 9
Mankato	16.7	15.2	5 0	10 6
Minneapolis	16.7	15.2	5 0	10 6
Lacrosse, Wis.	16.7	15 2	5 0	10 6
Green Bay	17 0	15 5	5 0	9 9
Milwaukee	16 5	15 0	5 0	10 4
Detroit, Mich.	15 1	13 6	4 0	9 8
Grand Rapids	16 3	14 8	4 0	11 0
Saginaw	16 1	14 6	4 0	9 1
Evansville, Ind.	16 8	15 3	5 0	†10 7
Indianapolis	16 9	15 4	5 0	†10 8
South Bend	17 2	15 7	5 0	9 0
Fargo, N. Dak.	16 7	15 2	4 0	11 6
Minot	17.9	16 4	4 0	12 8
Huron, S. Dak.	17 1	15 6	5 0	11 0
Kans. City, Mo.*	14 6	13 1	4 0	9 5
St. Louis*	14 9	13 4	4 0	9 8
St. Joseph	14 6	13 1	4 0	9.5
Wichita, Kans. *	14 1	11 0	4 0	8 5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Iowa kerosene prices include 3-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over 7 cents; Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Atl'tic, City, N. J.	12 75	11 25	4 0	8 5
Newark	12 75	11 25	4 0	8 5
Annapolis, Md.	14 85	13 35	5 0	9 5
Baltimore	14 25	12 75	5 0	9 0
Cumberland	16 65	14 15	5 0	10 0
Wash'g'n, D. C.	12 5	11 0	3 0	9 5
Danville, Va.	17 45	14 95	6 0	12 9
Norfolk	16 25	13 75	6 0	11 5
Petersburg	16 55	14 05	6 0	11 7
Richmond	16 55	14 05	6 0	11 7
Roanoke	17 75	15 25	6 0	12 9
Charles'n, W. V.	17 05	14 55	6 0	12 6
Parkersburg	15 35	13 85	6 0	11 2
Wheeling	16 25	14 85	6 0	12 2
Charlotte, N. C.	18 65	16 15	7 0	12 6
Hickory	19 15	16 65	7 0	13 0
Mt. Airy	18 95	16 45	7 0	12 8
Raleigh	18 25	15 75	7 0	12 1
Salisbury	18 75	16 25	7 0	12 7
Charleston, S. C.	17 25	14 75	7 0	11 1
Columbia	18 25	15 75	7 0	12 1
Spartanburg	18 95	16 45	7 0	12 9

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be the equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline Tank-wag.	Gasoline Net dlr.	Gasoline Inc. tax	Kero. tank-wag.
Atlanta, Ga.	21 0	18 0	7 0*	†14 0
Augusta	21 0	18 0	7 0	*14 0
Macon	21 0	18 0	7.0	*14 0
Savannah	19 5	16 5	7 0	*12 0
Birm'ham, Ala.	22 0	19 0	8 0	12 0
Mobile	21 0	18.0	9.0	†11 0
Montgomery	22 0	19 0	9 0	†13 0
Jackson, Miss.	20 0	17 0	7 0	*13 0
Vicksburg	20 0	17 0	7 0	*13 0
Jacks'ville, Fla.	22 5	17 5	8 0	†11 0
Miami	20 5	17 5	8 0	†12 5
Pensacola	22 0	19 0	9 0	12 0
Tampa	20 5	17 5	8 0	10 5
Lexington, Ky.	19 5	16 5	6 0	11 0
Covington	18 5	15 5	6 0	11 0
Louisville	19 0	16 0	6 0	10 5
Paducah	19 5	16 5	6 0	10 0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank-wag.
Denver, Colo.	15 0	5 0	11 5
Grand Junction	19 0	5 0	15 0
Pueblo	13.0	5.0	10.5
Casper, Wyo.	17 0	5 0	11 5
Cheyenne	16 0	5 0	13 0
Butte, Mont.	19 5	6 0	15 5
Billings	19 5	6 0	15 5
Helena	19 5	6 0	15 5
Great Falls	19 5	6 0	15 5
Salt Lake City, Utah	19 5	5 0	16 0
Twin Falls, Ida.	21 0	6 0	18 0
Boise	21 5	6 0	18 0
Albuquerque, N. M.	17 5	*6 5	12 0

*Includes city tax of one-half cent.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank-wag. con'r.	Gasoline Di-vided dlr.	Gasoline Inc. tax	Kero tank-wag.
Ohio points	16 0	15 00	5 0	*13 0

*Includes state tax of 1 cent.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Albany, N. Y.	14 5	12 5	5 0	9 0
*Met. N. Y.:				
M'nh't'n, Br'nx	14 5	12 5	5 0	8 75
Staten Island	14 5	12 5	5 0	8 75
Q'ns. & Brklyn	14 5	12 5	5 0	8 75
Buffalo	14 0	13 04	5 0	7 5
Rochester	15 0	13 17	5 0	8 5
Syracuse	14 5	13 12	5 0	9 0
Boston, Mass.	13 0	11 5	4 0	8 5
Portland, Me.	14 5	12 7	5 0	8 75
Manch'ter, N.H.	15 0	13 0	5 0	9 0
Burlington, Vt.	14 9	12 9	5 0	9 5

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer. Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point; monthly purchases under 5,000 gallons, pay divided dealer tank-wagon prices at delivery point.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank-wag.
San Francisco	17 5	18 5	4 0	11 5
Los Angeles	17 0	18 0	4 0	10 0
Fresno, Calif.	18 5	19 5	4 0	12 5
Phoenix, Ariz.	21 0	22 0	6 0	*17 0
Reno, Nev.	20 0	21 0	5 0	13 0
Portland, Ore.	20 0	21 0	6 0	13 5
Seattle, Wash.	20 0	21 0	6 0	13 5
Spokane	22 5	23 5	6 0	16 0
Tacoma	20 0	21 0	6 0	13 5

*Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Gasoline Drl.	Gasoline Inc. tax	Kero. tank-wag.
Omaha	17 7	16 2	6 0	10 5
McCook	17 5	13 5	6 0	10 0
Norfolk	18 1	16 6	6 0	10 9
North Platte	18 5	17 0	6 0	11 3
Scotts Bluff	19 2	16 0	6 0	12 0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
N. Orleans, La.	19 75	17 25	*10 0	†12 0
Baton Rouge	17 75	15 25	8 0	12 0
Alexandria	18 25	15 75	8 0	10 5
Lafayette	18 75	16 25	8 0	13 0
Lake Charles	18 75	16 25	8 0	12 5
Shreveport	17 25	14 75	8 0	9 5
Kn'ville, Tenn.	20 75	18 25	8 0	14 0
Memphis	18 75	16 25	8 0	12 0
Chattanooga	20 25	17 75	8 0	13 5
Nashville	19 75	17 25	8 0	11 5
Bristol	19 50	18 25	8 0	14 5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank-wag. dlr.	Gasoline Tank-car con'r.	Gasoline Inc. tax	Kero. tank-wag.
Philadelphia, Pa.	13 25	11 75	5 0	10 5
Pittsburgh	15 0	13 0	5 0	11 0
Allentown	14 25	12 75	5 0	11 0
Erie	14 5	13 0	5 0	10 0
Scranton	14 5	13 0	5 0	11 0
Altoona	15 0	13 0	5 0	11 0
Dover, Del.	14 0	....	5 0	11 0
Wilmington	14 0	....	5 0	11 0
Springf'd, Mass.	13 5	....	4 0	8 5
Worcester	14 3	....	4 0	9 0
Hartford, Conn.	13 6	....	4 0	8 5
New Haven	13 5	....	4 0	8 0
Providence, R. I.	13 3	....	4 0	8 5

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Dealer	Gasoline Inc. tax	Kero. tank-wag.
Muskogee, Okla.	14 5	5 0	7 0
Oklahoma City	14 0	5 0	8 0
Tulsa	14 0	5.0	6 0
Ft. Smith, Ark.	14 75	5 0	8 0
Little Rock	17 25	7 5	9 5
Texarkana	14 0	5 0	8 5

Texas

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank-wag.
Dallas, Tex.	15.0	19 0	5.0	8.0
Fort Worth	14 0	18 0	5 0	8 0
Houston	14 5	19 0	5 0	8 0
San Antonio	14 5	18.5	5 0	8 0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15 7
V.M.&P. naphtha	16 0
Cleaners' naphtha	15 0
Stanisol	15 0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wax.
Halifax, N. S.	24 0	8 0	18 5
St. John, N. B.	24 0	8 0	18 5
Montreal, Que.	21 0	6 0	17 5
Toronto, Ont.	22 0	6 0	17 0
Hamilton, Ont.	22 0	6 0	17 0
Winnipeg, Man.	27 5	7 0	20 7
Brandon, Man.	28 1	7 0	22 3
Regina, Sask.	27 0	7 0	22 0
Saskatoon, Sask.	29 8	7 0	24 9
Edmonton, Alta.	26 5	7 0	21 5
Calgary, Alta.	24 0	7 0	19 0
Vancouver, B. C.	23 0	7 0	23 0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Retail Price Changes

Standard Oil Co. (Indiana) January 28 reduced tank-wagon kerosene 2.1 cents in South Bend; February 7 advanced dealer gasoline 1.7 cents in St. Joseph.

Standard Oil Co. of Kentucky January 29 reduced tank-wagon and dealer gasoline 1 cent, and on February 4 reduced tank-wagon kerosene 1 cent in Mobile.

Atlantic Refining Co. February 1 reduced commercial tankcar gasoline .5 cent in Philadelphia; February 2 reduced dealer gasoline .5 cent in Dover.

Standard Oil Co. of Louisiana February 15 reduced tankcar and dealer gasoline prices from .5 to .75 cent in Tennessee, Louisiana and Arkansas. Changes not shown in accompanying table.

Crude Oil Prices

There were no crude oil price changes in the week ending February 15. The complete price schedules were last published on February 3.

New York Market

(Continued from Page 123)

reported available in certain parts of northern New Jersey at 12.9 cents per gallon, but mostly the prices were up around 15 cents.

Pennsylvania refiners were reported feeling the pressure of accumulating gasoline stocks, and 65-octane material was lowered a quarter of a cent per gallon in certain directions last week. Competition from outside refining districts was a factor.

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of February 15, 1938

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below	.03⅞	.04
63-66 octane	.04⅜	.04½
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.04⅞	.05
60-62 400 grades:		
62 oct. and below	.03⅞	.04
63-66 octane	.04⅜	.04½
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.04⅞	.05
64-66 375	.04½	.04¾
68-70 360	.04⅞	.05⅛

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.03⅞	.04
63-66 octane	.04⅜	.04½
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.04⅞	.05
60-62 400	.03⅞	.04
64-66 375	.04½	0.4¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)

U. S. Motor grades:		
62 octane and below	.04½	.04⅝
63-66 octane	.04⅜	.04¾
67-69 octane	.05	.05⅛
70-72 octane (regular)		.05½

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below	.04⅜	.04½
67-69 octane	.05	.05½
70-72 octane (regular)	.05½	.05⅝

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04	.04¼
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400 grades:		
62 octane and below	.04	.04¼
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.05	.05⅛
64-66 375	.04¾	.05
68-70 360	.05	.05¼

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.04½	.04¾
65 octane	.06¼	.06½
68-70 octane	.06¾	.07

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.08½
58-60 400, 65 oct. and higher	.08	.09¼

EAST COAST (Domestic)—

U. S. Motor, 60-64.9 octane:		
New York (Bayonne)	.07	.07¼
Philadelphia	.07	.07¼
Boston	.07½	.07⅝
Baltimore	.07	.07¼
Charleston, S. C.	.07	.07¼
U. S. Motor, 65 and above:		
*New York (Bayonne)	.07½	.07⅝
Philadelphia	.07⅛	.07⅜
Boston	.07¼	.07⅜
Baltimore	.07⅛	.07½
Charleston, S. C.	.07¾	.08

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05	.05⅛
60-64.9		.05¼
65 octane and higher	.05½	.05⅝

Naphtha

PENNSYLVANIA (inland refineries)—

52-56 450 (blending)	.04½	.04¾

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.02
Grade 18-55	.02⅝	.02½

NORTH TEXAS—

Grade 26-70		.01¾
Grade 18-55	.02⅛	.02⅝

CALIFORNIA—

75-85 375-390	.06½	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.02⅛	.02¼

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.04⅛	.04¼
41-43 gr., 300-520 e.p., 110-125 flash, 500-520 e.p.	.04¼	.04⅜
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04⅝	.04¾

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04⅛	.04¼
42-44	.04¼	.04⅜

NORTH TEXAS—

41-43	.04⅛	.04¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04⅜	.04½

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04½	.04⅝

PENNSYLVANIA (inland refineries)—

45	.05⅜	.05½
46	.05½	.05⅝
47	.05⅝	.05¾

CHICAGO (Based on Group 3)—

41-43	.04½	.04⅜
42-44	.04⅜	.04⅝

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.05¾	.06¾

NEW YORK (Bayonne, N. J.)—

41-43		.06

***GULF COAST (domestic)—**

41-43	.04⅞	.05

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅞	.04
No. 1 straw, 38-40	.03¾	.03⅞
No. 2 straw, 32-36	.03¾	.03⅞
No. 2 dark, 32-36	.03⅝	.03¾
No. 3 zero to 15, 28-32	.03⅜	.03⅝
No. 3, 15 and above, 28-32	.03	.03⅛

NORTH TEXAS—

No. 1 prime white, 38-42		.04⅛
No. 1 straw, 38-40		.04

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36		.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03⅞	.04

CHICAGO (Based on Group 3)—

No. 1 prime white 38-40	.04⅛	.04¼
No. 1 straw, 38-40	.04	.04⅛
No. 2 straw, 32-36	.03⅞	.04
No. 2 dark, 32-36	.03⅝	.03⅞
No. 3, zero to 15, 28-32	.03½	.03⅝
No. 3, 15 and above, 28-32	.03	.03⅛

NEW YORK (Bayonne, N. J.)—

*No. 1		.06
*No. 2		.05¼
*No. 4		.05

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02⅞	.03
No. 4, low cold test, 24-28	1.10	1.15
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.80	.85
Below 18 fuel oil, industrial	.65	.70

NORTH TEXAS—

U.G.I. gas oil	.02⅞	.03
No. 4, low cold test, 24-28	1.10	1.15
No. 5, low cold test, 18-22	.80	.85
Below 18 fuel oil, industrial	.65	.70

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.10	1.15
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.80	.87½
No. 5, 15 and above, 18-22	.75	.82½
No. 6, low cold test, 10-16	.72½	.80
No. 6, 15 and above, 10-16	.55	.60

PENNSYLVANIA (inland refineries)—

36-40	.04⅞	.05⅛

CALIFORNIA

Los Angeles:		
30-40 gas oil, per bbl.	1.35	1.70
24 plus diesel, per bbl.	1.45	1.70
24 plus diesel (bunkers)	1.55	1.70
12-16 (bunkers at tidewater)	.90	1.00
10-16 (cargo lots)	.85	1.00
12-17 (tankcars)	.80	1.00
10-17 (high sulfur)	.65	.90
San Joaquin Valley:		
10-18 (tankcars)	.60	.85
24 plus diesel, per bbl.	1.40	1.70
San Francisco:		
24 plus diesel, per bbl.	1.55	1.70
24 plus diesel (bunkers)	1.60	1.70
10-16 (bunkers)	1.00	1.05

GULF COAST—

28-30 gas oil	.04⅛	.04¼
28-30 diesel (bunkers)		1.90
Bunkers (bulk cargoes)		.85
Bunker C (bunkers)	.90	1.05

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.05
28-30 diesel (lighterage 6¼c per bbl.)		2.10
28-30 diesel (tankcars)		.05
Bunker C (to ocean-going ships in N. Y. harbor)		1.25
Industrial fuel (tankcars)	.04½	.04¾

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.19
150-160 D, 0-10		.16
150-160 D, 15-25		.15
150-160 E, 15-25		.14½
100-110 D, 0-10		.14½
Steam refined:		
631 green (treated)		.13½
600 dark green (untreated)		.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):

10 pour test	.18½	.19½
15 pour test	.17½	.18½
20 pour test	.16½	.17½
25 pour test	.15½	.16½
Steam refined:		
600	.08½	.09
650	.10½	.11½
600 Pennsylvania flash	.11	.13
630 flash	.14	.15
600 Warren E filtered	.13	.14

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.09
180-3		.10
180-4		.09½
200-3		.10½
200-4		.10
250-3		.11½
250-4		.11
280-3		.12½
280-4		.12
300-3½		.13
400-3½		.14
100-2½ paraffin oil		.06
15-20 Cold Test:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale Oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F. color, 400-405 flash:		
Zero pour test	.17½	.18
10 pour test	.16½	.17
15 pour test	.16	.16½
25 pour test	.15	.15½
180 vis. at 70° F., 3 color:		
25 pour test	.16	.16½
200 vis. at 70° F., 3 color:		
Zero pour test	.20½	.21
10 pour test	.19½	.20
15 pour test	.19	.19½
25 pour test	.17	.17½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02½	.02⅝

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.02	.02¼
124-126 (a.m.p.) w.c. scale	.02	.02¼

NEW YORK—

Wax in bags fully refined:		
122-125 (am.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0295	.0300
124-126 (a.m.p.) y.s.	.0265	.0280
Petrolatum in barrels, carload lots:		
Dark green		01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.05	.05½
60-62 400	.05⅝	.05½
61-63 390		.05⅝
64-66 375		.05¾

LOS ANGELES—

U. S. Motor grades:		
55-65 octane	.05½	.05¾
65-69 octane		.06
Above 69 octane		.06¼

KEROSENE

GULF COAST—

41-43 prime white	.04⅞	.05
41-43 water white	.05	.05⅛
44 water white	.05⅝	.05½

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.21½	.22
600 S.R. unfiltered	.16½	.17
630 S.R. unfiltered	.21	.21½
600 flash, S.R.	.21½	.22
630 flash, S.R.	.25½	.26
Bright Stocks:		
8 color	.23½	.24
6½ plus color in dilution	.23	.23½

NEUTRAL OIL

200-3 color	.30	.30½
150-3 color	.25½	.26

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p		.0525
135-137 a.m.p.		.0550
Crude Scale:		
124-126 w.s.	.0295	.0300
124-126 y.s.	.0265	.0280

Oil Man's Calendar

February

22-24—Milwaukee, Wis., Wisconsin Petroleum Association, Schroeder Hotel.
22-24—Columbus, Ohio, Ohio Petroleum Marketers Association, fifteenth annual convention and marketing exposition, Deshler-Wallick Hotel.
26—Wichita Falls, Tex., eighth annual banquet, North Texas Oil and Gas Association.

March

2-3—Indianapolis, Ind., Indiana Independent Petroleum Association, spring meeting.
2-4—Des Moines, Iowa, Iowa Independent Oil Jobbers Association and Trade Exhibit, Fort Des Moines Hotel.
7—Rochester, N. Y., American Society for Testing Materials, Spring Regional Meeting and Group Committee Meetings.
14-16—Toronto, Ontario, annual meeting of Canadian Institute of Mining and Metallurgy.
15-17—New Orleans, La., annual meeting, Society of Exploration Geophysicists, Roosevelt Hotel.
16-18—New Orleans, twenty-third annual meeting, American Association of Petroleum Geologists, Roosevelt Hotel.
21-22—Oklahoma City, Oklahoma Utilities Association.
21-22—St. Louis, Mo., Liquefied Petroleum Gas Association, annual meeting.
22-23—Sioux Falls, S. D., annual convention, South Dakota Independent Oil Men's Association, Cataract Hotel.
21-25—Los Angeles, Calif., American Society for Metals congress and exposition, Pan-Pacific Auditorium.
23-25—Los Angeles, Calif., American Society of Mechanical Engineers.
24-25—Fort Worth, Tex., American Petroleum Institute, Division of Production, spring meeting, southwestern district, Blackstone Hotel.

April

4-6—Cincinnati, Ohio, A.G.A. Distribution Conference, Netherland Plaza.
13-15—Cleveland, Ohio, National Petroleum Association.
13-15—Houston, Tex., Petroleum Industry Electrical Association.
14-15—Pittsburgh, Pa., Eastern District A.P.I. Division of Production, William Penn Hotel.
17-21—Dallas, Tex., American Chemical Society.
19—Los Angeles, Spring meeting, Pacific Coast district, A.P.I. Division of Production, Biltmore Hotel.
19-21—Norman, Okla., Gas Measurement Short Course.
20-22—Buffalo, N. Y., American Institute Mining and Metallurgical Engineers, Open Hearth Conference.
25-27—Hot Springs, Ark., Western Petroleum Refiners Association, annual meeting.

May

9-12—New Orleans, La., Natural Gas Department, A.G.A.
11-13—Tulsa, Natural Gasoline Association, Hotel Tulsa.
12-14—Tulsa, National Oil Scouts Association of America.
14-21—Tulsa, International Petroleum Exposition.
23-25—Wichita, Kans., American Petroleum Institute, eighth midyear meeting.

June

4—Robinson, Ill., sixth annual Petroleum Conference of Illinois-Indiana.
6—Houston, Tex., Oil Workers International Union.
16-18—Pittsburgh, Pa., Pennsylvania Grade Crude Oil Association.
20-24—St. Louis, Mo., American Society of Mechanical Engineers.

June-July

27-1—Atlantic City, N. J., annual meeting of American Society for Testing Materials.

August-September

31-3—Spokane, Wash., Pacific Coast meeting of American Institute of Electrical Engineers.

September

14-16—Santa Barbara, Calif., annual meeting Pacific Coast Gas Association, Biltmore Hotel.

October

——Tulsa, I.P.A.A., annual convention.
6-8—Knoxville, Tenn., fall meeting of industrial minerals division of American Institute of Mining and Metallurgical Engineers.
10-14—Chicago, National Safety Congress, Stevens Hotel.

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INQUIRIES solicited from corporations interested in raising capital through marketing of corporate securities.
THE BROOKWORTH CO., Inc.,
110 East 42nd St., New York City.

JOHN MORRIS, Box 5411, Philadelphia, writer of some of America's greatest financial campaigns will shape your deal FREE. Prospectus expertly written and list supplied for $25, and low commission. Handle your own mailing. Established 1913.

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, more liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Business Opportunities

CAPITAL negotiated to drill test wells. Write Mr. Barrick, New Martinsville, W. Va.

PARTY WITH CAPITOL wanted for the exploitation of the best informed Oil field in Cuba. New 30 years law, most convenient for producers. Address: Gustavo Roig, 4 esq. a 13, Dept. No. 8, Reparto Almendares, Habana, Cuba.

MUST SELL thousand div. paying Black Gold Pet. Co. Bargain. F.R.P., Box 53, Kenova, W. Va.

PARTY WITH CAPITAL to join hustling business group who wish to expand. Leases and Royalties that look like winners. Box 676, Greenville, Pennsylvania.

Mailing Lists

ROYALTY INVESTORS, by deed. Personal lists of oil industry. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa, Okla

For Sale—Maps

1939 REVISED EDITION
MAP of State of Texas, Eastern N. M., parts of Southern Okla., SW Ark. and La., shows Oil and Gas Fields in color, Counties, County Seats, elevations, coordinated alphabetical index of counties and fields.
Price $1.00 postpaid

Write for descriptive folder of Oilfield and County Ownership Maps.

ZINGERY OIL MAP COMPANY
Fair Building Fort Worth

Royalties

ROYALTY BUYERS who want to buy at pre-development prices should act now. Panola County, an East Texas Border County is now best wildcat area in East Texas. Leases mostly controlled by major companies. Address inquiries to P. O. Box 365, Henderson, Texas.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

CLASSIFIED

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.55*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Royalties

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY

Paul Brown Bldg., St. Louis, Mo.

Oil Royalties and Oil and Gas Leases
Bought and Sold
E. T. Marion
1109 Petroleum Building
Midland, Texas

Producing and Non-Producing
OIL ROYALTIES
Registered Dealers Only
GRIMES ROYALTY CO.
Hunt Bldg. Tulsa, Okla.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

Crude Oil Production

RODESSA CRUDE OIL, 43 gravity, paraffin base for sale from my own and other Miller County, Arkansas, wells delivered on Tankers at Good Hope (New Orleans), La. See my representative, O. E. Hodge, Carondelet Building, New Orleans. William Monroe Layton, Rodessa, Louisiana.